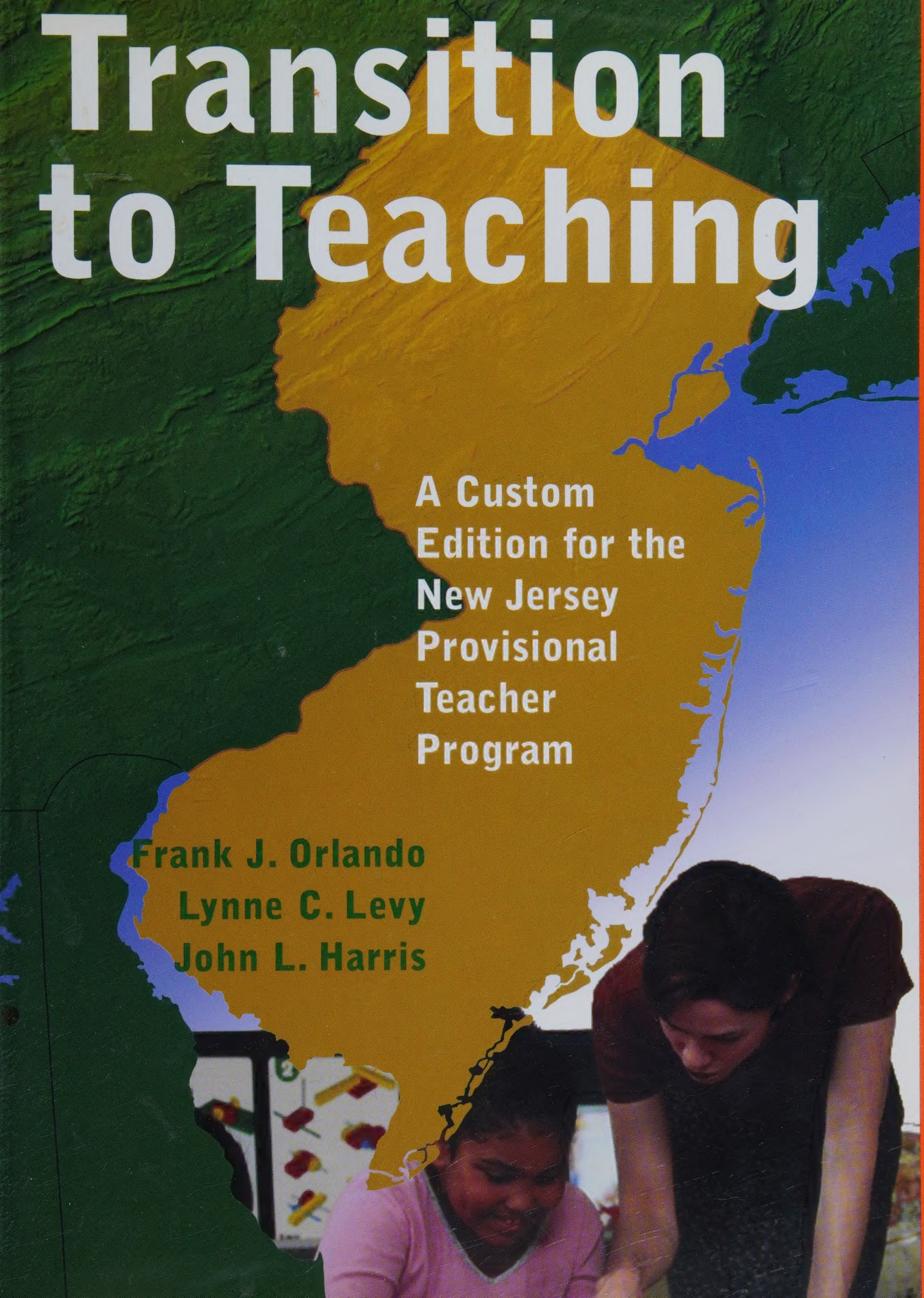
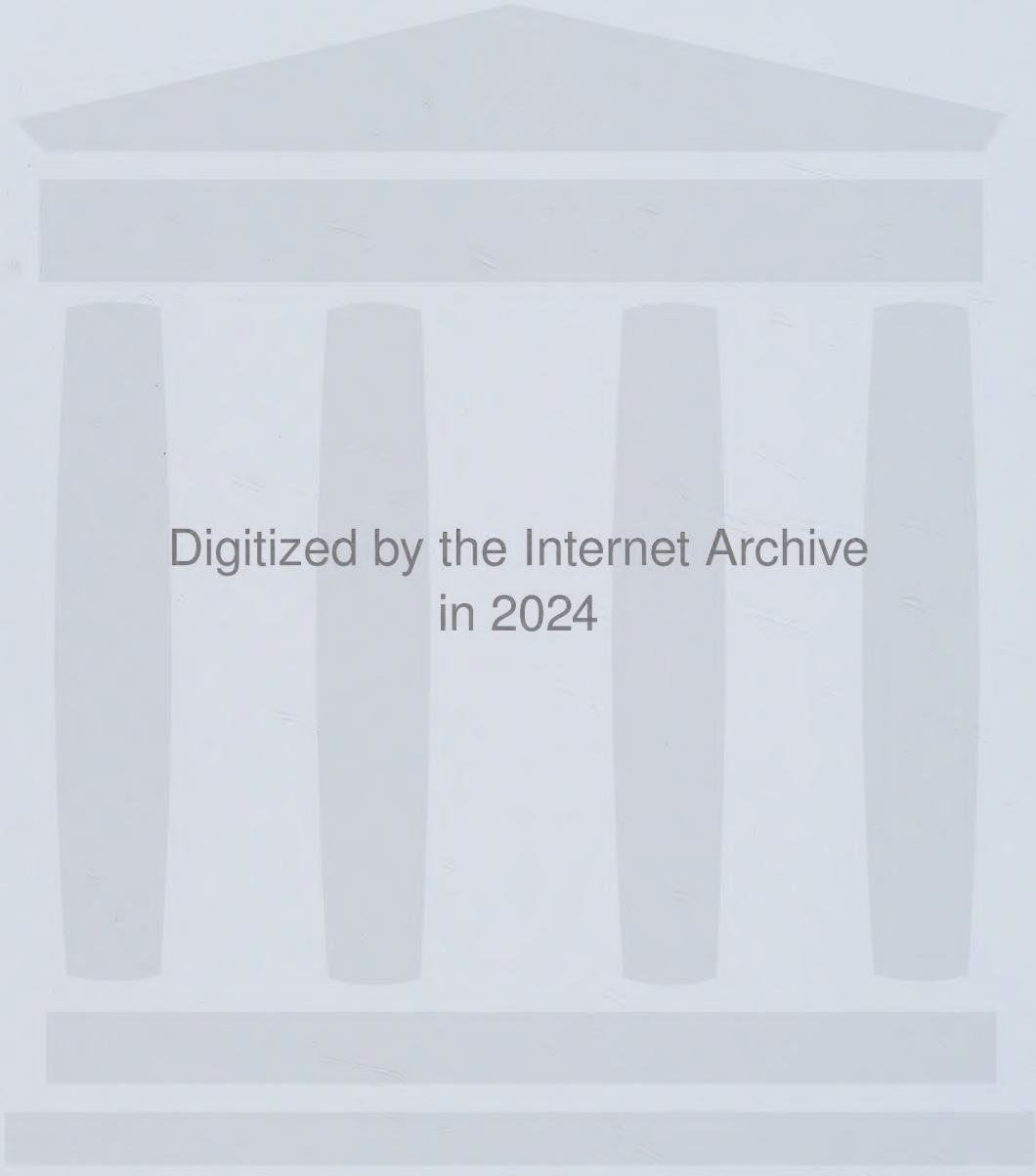
Transition to Teaching

A Custom Edition for the New Jersey Provisional Teacher Program

Frank J. Orlando
Lynne C. Levy
John L. Harris

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Transition to Teaching

A Custom Edition for the New Jersey Provisional Teacher Program

created with selected chapters taken from:

THOSE WHO CAN, TEACH, Ninth Edition
by
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James M. Cooper, University of Virginia

&

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Houghton Mifflin Company
Boston • New York

Custom Publishing Editor: Dan Luciano
Custom Publishing Production Manager: Kathleen McCourt
Project Coordinator: Katie Meyer
Cover Designer: Andre Mora

THOSE WHO CAN, TEACH
NINTH EDITION
by Kevin Ryan and James M. Cooper
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TEACHING, LEADING, AND LEARNING: BECOMING CARING PROFESSIONALS
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Printed in the United States of America.

ISBN: 0-618-30138-0
N01783

1 2 3 4 5 6 7 8 9 – CCI – 04 03 02

Houghton Mifflin
Custom Publishing

222 Berkeley Street • Boston, MA 02116

Address all correspondence and order information to the above address.

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GLOSSARY A-1

INTRODUCTION

During the early 1980's, schools across America were faced with a teacher shortage. New Jersey was no exception. In an attempt to deal with this situation, in 1985 the State of New Jersey began the Provisional Teacher Program. This alternative teacher certification program allowed individuals who possessed a bachelor's degree in a field other than education to become teachers.

Program content was based on "The Boyer Topics." This consisted of a listing of eighteen topics under three themes: Curriculum and Evaluation; Student Learning and Development; and Classroom and School. The topics were extrapolated from *The Report of a Panel on the Preparation of Beginning Teachers* (1984) chaired by Dr. Ernest L. Boyer.

In the nearly twenty years that have followed, New Jersey's Alternate Route to Teacher Certification has experienced continual growth and success. It has also been recognized as a leader in alternative teacher certification programs in the United States.

The National Center for Education Information -- the primary research organization to track the activities of alternative teacher certification programs in the United States -- has developed a classification system for categorizing the various state programs for alternative teacher certification. Programs are grouped under one of ten classifications ranging from Class A (the highest rating) to Class J (the lowest rating). New Jersey is one of only nine states to receive a Class A rating.

In *Alternative Teacher Certification: A State-by-State Analysis 2001*, C. Emily Feistritzer & David T. Chester, the authors of the National Center for Education Information report, define this classification:

> Class A programs are "true" alternative teacher certification programs that meet the following criteria:
>
> - The program has been designed for the explicit purpose of attracting talented individuals, who already have at least a bachelor's degree in a field other than education, into elementary and secondary school teaching.
>
> - The program is not restricted to shortages, secondary grade levels or subject areas.

- The alternative teacher certification programs in these states involve teaching with a trained mentor, and formal instruction that deals with the theory and practice of teaching during the school year -- and sometimes in the summer before and/or after.

A critical component of the New Jersey Alternative Teacher Certification Program is the formal instruction that is provided during the teacher's first year on the job. This year-long instruction, when combined with real life classroom experiences, has been essential to the transition to effective teaching.

In the field of education, textbooks are a recognized link connecting the student, the teacher, and the subject matter. This text is no different. It provides essential information the first year teacher needs to know to be successful. The specific selections included in this anthology are tied to "The Boyer Topics" and the instructional content identified for the formal instruction portion of the program.

Transition To Teaching will not only serve as a major element in the formal instruction program, it is a primary resource for guidance and ideas that the teacher can turn to on an as-needed-basis. The transition to teaching is not an easy process. It takes commitment and hard work. Like all endeavors, frustration will be a periodic visitor. However, the rewards for teaching will be unparalleled. We encourage you to strive for excellence and to remain steadfast in your quest to become a teacher.

We wish you well.

Frank J. Orlando
Lynne C. Levy
John L. Harris

PART ONE

TRANSITION TO TEACHING

Selections from New Jersey Department of Education—Provisional Teacher Program

All of the material in this information sheet was taken from the New Jersey Department of Education web site. The full text may be found at:

www.state.nj.us/njded/educators/license/1113.htm

Selected Information Regarding THE NEW JERSEY PROVISIONAL TEACHER PROGRAM

I. INTRODUCTION

During the past decade, the New Jersey State Board of Education has adopted revised regulations for teacher licensure which require the issuance of provisional licenses for novice teachers in virtually all instructional areas except special education. In 1985, the State Board of Education introduced the nation's first "alternate route" to licensure for qualified liberal arts graduates who have not completed professional education in a traditional teacher training program. "Alternate route" candidates attend a program of formal instruction that takes place concurrently with on-the-job support and evaluation. Regulations were further revised by the State Board of Education in 1989 to require provisional licensure and on-the-job support for all first year teachers in New Jersey - beginning with May 1993 college graduates who completed approved teacher training programs in all instructional areas except special education.

The regulations established a sequential three-step licensure process as follows:

A. **CERTIFICATES OF ELIGIBILITY:** These certificates provide the opportunity to seek employment. These are **NOT** teaching licenses.
   1. **CERTIFICATES OF ELIGIBILITY (CE):** The **CE** is issued to those qualified applicants who have not completed a state approved college teacher training program (i.e., alternate route candidates).
   2. **CERTIFICATES OF ELIGIBILITY WITH ADVANCED STANDING. (CEAS):** The **CEAS** is issued to all graduates of state approved college teacher training programs. Teacher candidates who can document one year of full time teaching experience under a valid state license will be issued standard licenses.

B. **PROVISIONAL LICENSE:** This one year license allows the holder to begin working in the classroom and legalizes employment. It signifies that the applicant holds a **CE** or a **CEAS** and has accepted an offer of employment. In addition, it signifies that the employing school district or approved nonpublic school has registered the applicant in the Provisional Teacher Program and has agreed to provide the required support and supervision.

C. **STANDARD LICENSE:** This permanent credential allows the holder to serve without condition in all New Jersey public schools. It signifies successful completion of Provisional Teacher Program requirements while serving under a provisional license during the first year of employment.

D. HOW LICENSURE WORKS - A SUMMARY OF THE PROCESS

When you are evaluated and determined eligible, you will receive either a:

1. **CERTIFICATE OF ELIGIBILITY (CE):** Issued to those who have not completed a state approved college teacher training program.
2. **CERTIFICATE OF ELIGIBILITY WITH ADVANCED STANDING (CEAS):** Issued to those who have completed a state approved college teacher training program.

These certificates provide the opportunity to seek employment. These are **NOT** teaching licenses.

When you have accepted an offer of employment, the employing school district or approved nonpublic school must register you in the Provisional Teacher Program and agree to provide the required support and supervision. At that time you will be notified through your employer of any additional documents and/or fees needed to obtain your PROVISIONAL LICENSE. This teaching license legalizes your employment in the school district in which you are employed. Provisional licenses expire at the end of the academic year (July) but may be renewed if program requirements are not fulfilled and you continue employment in the same district.

Upon successful completion of program requirements, you will need to submit a current Application for Licensure and the appropriate fee to receive your STANDARD LICENSE.

II. PROVISIONAL TEACHER PROGRAM: ESTABLISHING ELIGIBILITY

A. REQUIREMENTS FOR CERTIFICATE OF ELIGIBILITY WITH ADVANCED STANDING(CEAS) OR CERTIFICATE OF ELIGIBILITY (CE)

To be **eligible for employment**, you must have a **CEAS** or a **CE**. The following are necessary to obtain one of these certificates:

CERTIFICATE OF ELIGIBILITY (CE)

- Bachelor's (or Master's) Degree
- Secondary School candidates (N-12): a major in the subject teaching field (e.g., Biology, English, Mathematics)
- Elementary School candidates (N-8): a major in the liberal arts or sciences
- Completion of the test requirement: (see web site for test requirement)

CERTIFICATE OF ELIGIBILITY WITH ADVANCED STANDING (CEAS)

- Bachelor's (or Master's) Degree
- Completion of a state approved college teacher training program culminating in supervised student teaching
- Secondary School candidates (N-12): a major in the subject teaching field (e.g., Biology, English, Mathematics)
- Elementary School candidates (N-8): a major in the liberal arts or sciences
- Completion of the test requirement: (see web site for test requirement)

Specific information and requirements for Vocational Education and Bilingual/ESL Education are available at the web site.

B. PROVISIONAL TEACHER PROGRAM - APPLICATION PROCESS: HOW TO APPLY

[Go to the web site for information regarding the application process.]

SELECTED ADDITIONAL CERTIFICATION INFORMATION

1. TEST REQUIREMENT FOR LICENSURE

Applicants must satisfy the test requirement for licensure in designated license areas. Licensed out of state applicants must also satisfy the test requirement. Applicants in college approved programs must seek advisement from their respective colleges. The Praxis Series code for the Office of Licensing and Academic Credentials is R7666. Passing scores are subject to change. Only official and unopened score reports are accepted. The applicant's Social Security number must appear on the score report.

2. GRADE POINT AVERAGE REQUIREMENT

Applicants for initial instructional certificates must have a baccalaureate degree, post-baccalaureate program or advanced degree cumulative grade point average of at least 2.75 when a 4.0 equals an A grade.

5. RECIPROCITY

New Jersey is a party to the Interstate Certification Compact for reciprocity with member states in designated instructional areas. Licenses/certificates from other states and transcripts are reviewed to determine if applicants are eligible for reciprocity. Applicants from other states must complete the test requirement.

8. PHYSIOLOGY AND HYGIENE REQUIREMENT

Applicants must pass an examination in physiology and hygiene, including the effects of narcotics and alcohol. The examination is administered in county offices of education. In lieu of this examination the applicant may present basic military training or college level study in areas such as biology, health or nutrition.

NOTE: Licensure regulations and fees are subject to change.

III. PROVISIONAL TEACHER PROGRAM: TRAINING, SUPPORT AND EVALUATION

The issuance of an appropriate certificate of eligibility authorizes the holder to seek and accept offers of employment and to enter into employment contracts with a public school or approved nonpublic school. This certificate, however, does not authorize its holder to begin teaching. When the certificate holder accepts an offer of employment the district/school must register the employment to the Office of Professional Development (609) 984-6377 and request issuance of a provisional license. The district/school has the following minimum responsibilities to a provisional teacher during the induction year:

1. Evaluate the new teacher three times, the last of which includes a recommendation for standard licensure; and
2. Assign a support team to supervise and assist the new teacher.

Formal Instruction

1. **Provisional Teacher Holding a CE:** Formal instruction consists of approximately 200 clock hours of study in essential areas of professional knowledge and skills. Training is presented after school hours at a district-operated or state-operated training center. Training center schedules vary but most centers provide instruction on weekdays and Saturdays. These centers are located throughout the state. Instruction is available only to those candidates who have accepted employment in a school and are registered in the Provisional Teacher Program.

2. **Provisional Teacher Holding a CEAS:** Not applicable. This component has been completed in the college teacher training program.

Training Costs

1. **Provisional Teacher Holding a CE**

$1,100	This fee is paid to the Commissioner of Education to cover the cost of the formal instruction. If the instruction is provided through a consortium, the $1,100 will be collected by the consortium.
$450	This fee is paid to the mentor(s) who supports the provisional teacher for the initial 20-day practical experience (Phase I).
$550	This fee is paid to the mentor(s) who serves on the professional support team (Phase II and III).

While it is the ultimate responsibility of the provisional teacher to pay the $2,100 in fees, districts may subsidize some or all of the costs. This is a district decision. All fees must be paid.

2. Provisional Teacher Holding A CEAS

$550 This fee is paid to the mentor(s) who serves on the professional support team. This fee must be paid.

While it is the ultimate responsibility of the provisional teacher to pay the $550 in fees, districts may subsidize some or all of the costs. This is a district decision.

The following detailed step by step process reviews the requirements for training, support and evaluation and the differences in the induction program for all beginning teachers.

PROVISIONAL TEACHER PROGRAM
TRAINING, SUPPORT AND EVALUATION

PROVISIONAL TEACHER HOLDING A CE (ALTERNATE ROUTE CANDIDATES)	PROVISIONAL TEACHER HOLDING A CEAS (TRADITIONAL ROUTE CANDIDATES)
• PHASE I (4 WEEKS) •	• PHASE 1 (4 WEEKS) •
Initial 20-day period under the guidance of an experienced, certified teacher (i.e., mentor) before the provisional teacher takes full charge of the classroom	Not applicable.
Formal instruction begins at training center.	Not applicable.
• PHASE II (10 WEEKS) •	• PHASE II (10 WEEKS) •
During the first 10 weeks in full charge of the classroom, the provisional teacher is under the guidance of a professional support team. During this time, contact with member(s) of the team shall be made a minimum of one time every two weeks.	During the first 10 weeks in full charge of the classroom, the provisional teacher is under the guidance of a professional support team. During this time, contact with member(s) of the team shall be made a minimum of one time every two weeks.

First formal evaluation by the principal at the end of 10 weeks. (Formative Evaluation)	First formal evaluation by the principal at the end of 10 weeks. (Formative Evaluation)
Formal instruction continues at training center.	Not applicable.
• PHASE III (20 WEEKS) •	**• PHASE III (20 WEEKS) •**
During the next 20 weeks of teaching, the provisional teacher is under the guidance of a professional support team. During this time, contact with team member(s) shall be made a minimum of four times.	During the next 20 weeks of teaching, the provisional teacher is under the guidance of a professional support team. During this time, contact with team member(s) shall be made a minimum of four times.
Two additional formal evaluations: one at the end of 10 weeks (Formative Evaluation) and the final evaluation at the end of 30 weeks of full time teaching (Summative Evaluation).	Two additional formal evaluations: one at the end of 10 weeks (Formative Evaluation) and the final evaluation at the end of 30 weeks of full time teaching (Summative Evaluation).
Formal instruction continues at training center.	Not applicable.

If after reading the information on this page and the previous page, you have questions regarding training, support and evaluation, please contact the Office of Professional Development at 609-984-6377.

IV. ADDITIONAL INFORMATION

A. TEST REQUIREMENT FOR LICENSURE IN NEW JERSEY

INTRODUCTION

Applicants for New Jersey licensure in subject teaching fields must pass the appropriate PRAXIS II Subject Assessment test(s). Applicants for licensure in elementary education must pass the Elementary Education: Content Knowledge test. The tests are required for all applicants including those applicants who are licensed in other states.

Consult the Provisional Teacher Program web site for information regarding passing scores, teaching fields that are exempt, fees, registration procedures, deadlines, etc.

B. VOCATIONAL TEACHERS

VOCATIONAL TEACHING FIELDS

The current regulations requiring first year teachers to complete the Provisional Teacher Program apply to new teachers in the following vocational fields:

Teacher of Agricultural Occupations
Teacher of Allied Health Occupations
Teacher of Practical Nursing
Teacher of Production, Personal or Service Occupations
Teacher of Skilled Trades
Teacher of Technical Occupations
Teacher of Vocational Arts/Dance

Consult the Provisional Teacher Program web site for information regarding the three-step licensure process for vocational teachers.

C. BILINGUAL/BICULTURAL EDUCATION AND ENGLISH AS A SECOND LANGUAGE EDUCATION

Consult the Provisional Teacher Program web site for detailed information regarding licensure procedures for Teachers of Bilingual/Bicultural Education and English as a Second Language (ESL).

D. COUNTY OFFICE OF EDUCATION DIRECTORY: OFFICE LOCATIONS AND TELEPHONE NUMBERS

- ATLANTIC
  6260 Old Harding Highway, Mays Landing, NJ 08330
  609-625-0004
- BERGEN
  One Bergen County Plaza, Room 350, Hackensack NJ 07601
  210-336-6875
- BURLINGTON
  3 Union Street, PO Box 6000, Mount Holly, NJ 08060-6000
  609-265-5003
- CAMDEN
  509 Lakeland Road, Forrest Hall, Blackwood, NJ 08012
  856-401-2400
- CAPE MAY
  Crest Haven Complex, 4 Moore Rd., Cape May Court House, NJ 08210
  609-465-1283
- CUMBERLAND
  19 Landis Avenue, Bridgeton, NJ 08302
  856-451-0211

- ESSEX
  155 Fairview Avenue, Cedar Grove, NJ 07009
  973-857-5700
- GLOUCESTER
  Office: Tanyard & Salina Road, Sewell, NJ 08080
  Mailing: 1492 Tanyard Road, Sewell, NJ 08080-4222
  856-468-6500 x34
- HUDSON
  Mailing: 595 Newark Avenue , Jersey City, NJ 07306
  Office: 595 County Avenue, Bldg. 5, Secaucus, NJ 07094
  201-319-3850
- HUNTERDON
  Office: 1 East Main Street, Flemington, NJ 08822
  Mailing: County Adm. Bldg., Flemington, NJ 08822
  908-788-1414
- MERCER
  1075 Old Trenton Road, Trenton, NJ 08690
  609-588-5876
- MIDDLESEX
  1501 Livingston Avenue, North Brunswick, NJ 08902
  732-249-2900 x 112
- MONMOUTH
  3435 Highway 9, P.O. Box 1264, Freehold, NJ 07728
  732-431-7826
- MORRIS
  Office: 300 Mendham Rd, Morris Twp., NJ 07960
  Mailing: PO Box 900, Morristown, NJ 07963-0900
  973-285-8320
- OCEAN
  212 Washington Street, Toms River, NJ 08753
  732-929-2078
- PASSAIC
  810 Belmont Avenue, North Haledon, NJ 07508
  973-304-6020
- SALEM
  94 Market Street, Salem, NJ 08079
  856-935-7510
- SOMERSET
  County Administration Building, P.O. Box 3000, Somerville, NJ 08876
  908-231-7171
- SUSSEX
  18 Church Street, Newton, NJ 07860
  973-579-6996
- UNION
  300 North Avenue East, Westfield, NJ 07090
  908-654-9863
- WARREN
  537 Oxford Street, Belvedere, NJ 07823
  908-475-6329

• THE BOYER TOPICS •

The New Jersey Provisional Teacher Program uses topics identified by Dr. Ernest L. Boyer as a framework to provide instruction that is essential for all beginning teachers. These "Boyer Topics" include the following:

I. Curriculum and Evaluation

A. Organization of subject matter and presentation of subject matter
B. Development and use of tests and other forms of assessment
C. Use and interpretation of standardized tests and teacher developed instruments
D. Appropriate use of textbooks and teachers' guides
E. Reading process and other language arts skills development
F. Techniques and materials for fostering the development of reading and other language arts skills

II. Student Learning and Development

A. Student interest, motivation
B. Preventing classroom disruption and creating a healthy learning climate
C. Individual and group learning
D. Language development
E. Individual differences
F. Role of technology in early learning

III. Classroom and School

A. Bureaucratic/social structure of public education
B. The making of teaching decisions
C. Allocation of instructional time
D. Setting priorities
E. Questioning techniques
F. Student practice and independent work

NEW JERSEY DEPARTMENT OF EDUCATION
Provisional Teacher Program Assessment of Formal Instruction

Regional Training Center:_____ **Date:**_____ **Phase:**_____

Instructions: The New Jersey Department of Education conducts on-going assessments of the formal instruction you received at the regional training center. Information provided by you will be instrumental to both the Department of Education and this center in the future refinement of the training of provisional teachers. Please answer all questions using the scale provided.

1. How useful to your teaching was the formal instruction you received at the regional training center? **1 = not at all useful; 5 = extremely useful**	1	2	3	4	5
2. How responsive were the instructors to your specific questions and concerns about the actual teaching process? **1 = not at all responsive; 5 = extremely responsive**	1	2	3	4	5
3. How relevant were the assignments required by the instructors to the content of the course? **1 = not at all relevant; 5 = extremely relevant**	1	2	3	4	5
4. How would you rate the level of difficulty of the assignments made by the instructors? **1 = much too easy; 5 = much too difficult**	1	2	3	4	5

USE THE FOLLOWING SECTION FOR ANY GENERAL COMMENTS ABOUT THE FORMAL INSTRUCTION YOU HAVE RECEIVED:

_____

_____

_____

_____

_____

_____

_____

_____

- over -

The following topics are included in the approximately 200 hours of study in professional knowledge and skills mandated by state regulations for alternate route candidates participating in the Provisional Teacher Program. The order in which these areas are taught is left to the discretion of the center at which you are enrolled. For each topic please indicate whether it was: **1 = Taught Effectively; 2 = Needs Improvement; or 3 = Not Applicable During This Phase.**

A. Organization and presentation of subject matter	1	2	3
B. Development and use of tests and other forms of assessment	1	2	3
C. Use and interpretation of standardized tests and teacher developed instruments	1	2	3
D. Appropriate use of textbooks and teacher's guides	1	2	3
E. Reading process and other language arts skills development	1	2	3
F. Techniques and materials for fostering the development of reading and other language arts skills	1	2	3
G. Student interest and motivation	1	2	3
H. Preventing classroom disruption and creating a healthy learning climate	1	2	3
I. Individual and group learning	1	2	3
J. Language development	1	2	3
K. Individual differences	1	2	3
L. Role of technology in early learning	1	2	3
M. Bureaucratic/social structure of public education	1	2	3
N. Making of teaching decisions	1	2	3
O. Allocation of instructional time	1	2	3
P. Setting priorities	1	2	3
Q. Questioning techniques	1	2	3
R. Student practice and independent work	1	2	3

REGIONAL TRAINING CENTER REPORT

TO: _____
Principal (Chairperson, Support Team)

_____ _____
School School District

FOR: _____ _____
Provisional Teacher Social Security Number

Submitted By: _____ _____
Regional Training Center Faculty Regional Training Center

Phase _____ Dates of Instruction _____ to _____

Instructional Component _____

Attendance Total Number of Hours _____ Number of Hours Absent _____

Assessment of Academic Achievement

(Based on seminar participation, completion of assignment and field projects)

Check One:

Unsatisfactory _____
Satisfactory _____
Outstanding _____

Comments:

DISTRIBUTION: **WHITE - Principal** **CANARY - Provisional Teacher** **PINK - Regional Training Center Faculty** **GOLDENROD - Department of Education**

F93-04895

PART TWO

TRANSITION TO TEACHING

Selections from
Those Who Can, Teach, 9th Edition
by Kevin Ryan &
James M. Cooper

2 What Can the New Teacher Expect?

CHAPTER PREVIEW

Many new teachers are shocked and disappointed by the actual experience of being a teacher. In this chapter, we try to help prospective teachers anticipate some of the problems that lie ahead. All of the material comes directly from the experiences of beginning teachers.

This chapter emphasizes that

- Although prospective teachers may feel that schools will hold few surprises, being on the other side of the desk is a very different experience and can cause a sense of culture shock.
- Administrators play an important but often confusing role in the life of the beginning teacher.
- Although fellow teachers are an enormous source of learning and support, they can also be a source of difficulty.
- New teachers learn much about the job in which they are supposed to be experts: instruction.
- Although the teachers' main purpose is to give service to children, students are also a source of both satisfaction and dissatisfaction.
- Some of the most intense satisfactions and disappointments confronting new teachers come from those they came to help: students.
- Working with parents can be surprisingly complex and is rarely what the new teacher has anticipated.
- Beginning teachers can follow specific strategies to mitigate problems and heighten their chances for a successful career start.
- Teaching invariably has hidden sweetness and secret joys.

We have good news and bad news for you. First, the good news: forecasters predict that as a result of retirements and population growth, our schools will need 2 million new teachers in the next decade.[1] Not since World War II has there been such a promising job market for teachers. As we will describe later, young people entering the teaching profession in the first decade of the twenty-first century typically will have a rich variety of options and opportunities from which to choose. So much for the good news.

encouraging job reports

The bad news is that the first year of teaching can be a rough one—too rough for many beginners. Each year many new teachers walk into their classrooms with energy, high hopes, and rose-colored glasses. But unexpected problems cause them to give up on teaching or radically lower their sights about their capabilities as teachers. Rather than ignoring or, worse, sugar-coating these problems, we focus on them even at the risk of frightening some readers. However, to be forewarned is to be forearmed, and many of the problems discussed in this chapter can be either prevented or radically reduced in intensity.

But intense the first year is—intense because of the unexpected demands and the surprises that lurk in what was thought to be a familiar world: the classroom. Some of this intensity comes from the problems that confront the new teacher, but some also comes from the satisfaction in solving those problems and in succeeding as a professional.

Surprise is a big part of the first year, too. New teachers often report their astonishment at this or that experience or event. These surprises often come wrapped in everyday boxes; some contain sweet treasures and others hold booby traps. We have categorized these surprises in the following way:

surprises of the first year

- The school milieu: the shock of the familiar
- Administrators: mixed bag and many hats and many pressures
- Peers: a mixed blessing
- Instruction: so much to learn
- Students: friends or fiends?
- Parents: natural allies with different agendas

A teacher's day is half bureaucracy, half crisis, half monotony, and one-eightieth epiphany. Never mind the arithmetic.

—*Susan Ohanian*

In this chapter, we will look at each of these categories and try to take some of the surprises out of the first year of teaching. We intend this chapter, then, to help you mobilize yourself by preparing for the problems, developing your strengths, and shoring up your weaknesses.

The School Milieu: The Shock of the Familiar

the strange and the familiar

One of the oddest occurrences related to becoming a teacher is the new teacher's sense of strangeness in what is, after all, a very familiar setting. People who become securities analysts, astronauts, or psychiatric social workers know they are moving into a strange environment, and they expect these new work worlds to present them with very different experiences from those they had as students. New teachers, however, are re-entering a familiar setting, even if their schools are not the same ones in which they were taught. The school routine of classes, periods, bells, tests, homework, and report cards is in their blood. So are the rituals and pageants: assemblies, Thanksgiving class presentations, honor society induction, and sports rivalries with other schools. The existence of cliques, in-groups, and out-groups among both students and faculty is no secret either. But despite all their experience and sophistication, beginning teachers are often overwhelmed by their initial exposure to school.

false sense of security

It appears that the new teacher's very familiarity with life in schools is a problem in that it lulls many into a false sense of understanding what is happening around them and thus a false sense of security. "School" is a very complicated series of structures, people, and interactions, and having "studied" school from the perspective of a student is hardly the same as understanding it as a teacher. Being one of twenty-five students sitting and listening to a teacher is quite different from being in front of twenty-five strange children and having responsibility for their learning. Also, new teachers have to learn not only a new set of school routines for their particular school but also how to administer them. They have to learn their way around a new building and find out how to requisition the supplies they need. They have to get acquainted with their administration, their fellow teachers, and especially their students. And on top of all this, first-year teachers often have to develop lesson plans from scratch. They must build complete units, design bulletin boards, devise an evaluation system, and make up tests. The sheer volume of "newness" puts pressure and strain on the beginners.

I am teaching . . . It's kind of like having a love affair with a rhinoceros.

—ANNE SEXTON

Culture Shock

signs of stress

Beginning teachers' disorientation with what they thought would be the familiar turf of school often shows up in visible signs of mental and physical stress. In the early months of the school year, it is not uncommon for the new teacher to experience depression and self-doubt, outbursts of crying, physical exhaustion, insomnia, crankiness, inability to control temper, and even fits of vomiting before going to school in the morning. One anthropologist claims that the stresses and strains many new teachers experience are similar to the phenomenon known as "culture shock."[2]

school: a foreign culture?

Culture shock is the feeling of dislocation that people experience when they initially encounter a foreign culture. Peace Corps volunteers, foreign students, tourists, and newly arrived immigrants often report that when first thrust into the strange life patterns of a foreign culture, they feel numbingly disoriented,

forced to assimilate too much too soon, and afraid they have made a drastic mistake by going to a strange country. It is easy to explain culture shock among Peace Corps volunteers and immigrants, but why teachers? Haven't we just said that teachers, as ex-students, are accustomed to the culture of school?

The following account by a new second-grade teacher speaks to the kinds of culture shock problems experienced by teachers in many situations.*

CASE STUDY

Karen Bohlin/Second Grade

"The next time I hear someone say, 'Teaching is an easy job,' I think I'm going to slap their face . . . or cry! I can't believe how tired I am. I've been teaching for five weeks, and it seems as if it has been five months. I never realized that life on the teacher's side of the desk could be so different, so tiring. I remember seeing the old movie *Up the Down Staircase* and thinking it was exaggerated. My kids are younger and don't have the kinds of problems those high school kids in the movie had, but they still have problems, and they are so demanding. They all want my attention, and they all seem to want it at the same time. 'Miss Bohlin, someone took my pencil! Did you do it?' 'Miss Bohlin, Ralph and Maxine put gum in my hair.' 'Miss Bohlin, my father doesn't think we're doing enough arithmetic in this class and says I can tell the kids to shut up if you won't.' 'Miss Bohlin, I need to go to the nurse. I have a terrible nosebleed coming on!' And on and on.

"And the forms! They never end. Forms for shots. For lockers. For parent volunteers. For books. And we have an attendance procedure here that must have been designed by a sadist! It consumes hours of time. The principal's office continually wants information. I keep filling out forms and sending them in, only to be greeted with more forms. I can't imagine what they do with all the information.

"On top of all this, I'm supposed to teach! I leave school in the afternoon—always the last one out of the building—and I'm numb from the hairline down. On some nights, I can hardly unwrap a TV dinner. And I spend what little free time I do have staring at the TV set and having imaginary arguments with Sandra's know-it-all father (whom I have yet to meet) about why we actually are doing just the right amount of arithmetic. What is most discouraging is that Sandra's father wins the arguments.

"Clearly, this has been the most frustrating five weeks of my life. I feel as if I've been swimming in molasses. Student teaching was a breeze compared to this!"

But how do I feel at the end of each day? I feel proud of my students. I feel more knowledgeable about living, teaching, and learning. I feel lucky to be a teacher. I feel . . . full of sparks.

—IRASEMA ORTEGA-CRAWFORD

swimming in molasses

pleasant surprises

But many of the surprises of school life are very pleasant ones. There is much love and human warmth in the classroom. Some of the aspects of school life that one has dreaded never materialize. The content that one felt unsure of turns out to be one's strength. Also, within the four walls of the classroom, some people find a new self they didn't know existed.

*All the cases in this chapter that are not accompanied by specific citations are slightly altered or fictionalized accounts of situations and problems experienced by the authors or by beginning teachers with whom the authors have worked. The names have been changed to save us all from embarrassment.

The class clowns who were so amusing to you in high school are often a very different story when they reappear in your classroom. (© Elizabeth Crews)

CASE STUDY **Joan Gee/Office Management**

"All through elementary and high school, I was bashful. In my high school graduating class, I won the 'Most Shy' award. I dreaded being called on, even when I knew I had the right answer! Part of it is that I blush so easily. So my approach was to be like the furniture or the wallpaper and hope that the teacher wouldn't see me. Still, I liked school and always liked my teachers, even the ones that had fun with my blushing. When I decided to become a teacher, I knew my shyness was going to be a problem, but I figured that I could pass my blushing off as a permanent sunburn.

personality transformation

"Something happened, though, when I became a teacher. I began to notice a change when I was student teaching, and once I had my own class, it was quite clear: I'm a different person in my class. I feel very outgoing, almost to the point of being aggressive. Also, I've discovered that I'm a ham actor. And what a stage my classroom is! I love it. My students seem to love it, too. It seems so odd that after all these years of trying to be invisible, now I'm discovering a whole new side of myself."

Administrators: Mixed Bag and Many Hats

As elementary and secondary school students, most of us had pretty simplistic notions of administrators. The superintendent was a vague presence we occasionally glimpsed in the hall talking to one of the staff or in front of a microphone on ceremonial occasions. The principal was much more a part of our school lives as someone beloved or feared, and occasionally both. Even though the principal was near at hand, our student's-eye view was rather one-dimensional. The principal represented AUTHORITY. In all but the rarest instances, the principal stood directly beyond the teacher, supporting the teacher and the system. When, as students, we went to the principal's office, it usually meant we were in trouble.

The Multiple Roles of the Principal

New teachers' relationships with their principals are not so simple, however. School principals loom quite large in the lives of beginning teachers, and the teacher-principal relationship (and relationships with vice principals, department heads, and master teachers) is many-faceted. The principal is, first, a *colleague,* a fellow educator joined with you in the common task of bringing civilization to the young. You are both professionals. You are both part of a common tradition. You probably share common goals (such as improving the educational opportunities of children) and attitudes (for example, that people engaged in the important work of educating the young need more support from the public than they receive).

principals as colleagues

Principals are the *official leaders.* They make decisions, or act as the funnel for the decisions of higher authorities. Decisions made by teachers or students are normally checked with principals. Principals speak for the school community to the superintendent, the press, and the local citizens. Nothing is ever quite "official" unless the principal has been involved.

as leaders

Principals are *helpers.* They can dispense information and materials, and, as experienced teachers, they are sources of tips, shortcuts, and helpful suggestions. Principals also visit classrooms and ordinarily hold conferences with teachers. They are there to aid beginning teachers who are encountering difficulties and confusion.

as helpers

Principals are *policymakers.* A school system is a bureaucracy whose long arm extends from the state commissioner of education, to the local district

as policymakers

You Know You're in Trouble When . . .

- You have threatened that if there is one more sound in the classroom, you will personally call every parent to complain—and you hear a sound.
- The principal asks you what you plan to be doing next year.
- You have your students correct their own tests and the lowest mark in the class is 96 percent.
- It is 10:15 and the class has ripped through three-quarters of the work you have prepared for the day.
- You return after being sick for three days and the students chant, "We want the substitute!"
- It feels like February and it's only late September.
- The teacher across the hall comes in and offers to show your kids how to behave.
- The parents of eleven of your students ask to see the principal and you are not invited.
- Unsolicited, your principal offers to write a recommendation for your placement file.
- You are convinced you have finally come up with challenging and interesting work for your class, and when you present it they chorus, "We did that last year."
- After sitting in your class for five minutes, your supervisor starts to look at the clock.
- You walk into your usually noisy classroom and immediately all the students get in their seats and smile at you.

superintendent of schools, to the individual school principal. The long arm is, in fact, educational policy, the ideas that are supposed to direct what happens in a school. Principals, in effect, act on behalf of the bureaucracy by introducing teachers to the policies and monitoring the policies' implementation. In addition, principals often set their own policies unique to their school building, such as discipline and dress codes, assembly activities, and a character education program.

as crisis managers

Principals are *crisis managers.* When something happens that a teacher cannot handle, the principal's office is where he or she naturally turns for help. A principal needs to know about crises in the school to try to deal with them effectively.

as facilitators

Principals are *facilitators.* Schools run on things: pencils, books, paper, heat, hot lunches, sanitary toilets, lights, construction paper, petty cash, and keys. It is the principal's job to keep teachers supplied so that they, in turn, can carry out the aims of the school.

as dispensers of rewards

Principals are *reward dispensers.* Principals assign classes to teachers, deciding what kind of children they will teach and whether the children will be at the level or in the subject for which particular teachers are prepared. Principals can also give or withhold compliments on teacher performance and give or withhold extracurricular duty assignments.

as judges

Principals are *judges.* Principals make the decision about a new teacher's qualifications to teach in their school and later decide whether or not the teacher's performance merits rehiring him or her. After all, first-year teachers are neither permanent members of the faculty nor permanently certified members of the teaching profession. Principals can write recommendations for or against teachers. They can enhance or destroy people's reputations as teachers. This role of judge is one that new teachers often don't appreciate until it is too late.

as buffers

Principals act as *buffers* between teachers and angry parents (or, occasionally, angry students). Teachers can be quite vulnerable to public attack. Parents hear tales from their children or from other parents and, if they have a question or a complaint to make against a teacher, often go directly to the principal, not to the teacher. The principal is the official "complaint department." This is a delicate position, requiring the principal to be open and responsive to complaints and at the same time support the position of the teacher involved. Such situations call for the skills of high diplomacy.

as sacrificial lambs

Finally, principals are the *sacrificial lambs.* Like new teachers, principals do not have tenure in their role. If the community, the teachers, or the school board become dissatisfied with what is going on in a particular school, the school's principal is vulnerable. No one suggests replacing the students! The tenured staff cannot be dismissed (except under very special circumstances). Thus, the principal, who may or may not be responsible for the reported problem, is likely to be chosen to pay the penalty. The ease with which the principal can be dismissed is, incidentally, a characteristic shared with beginning teachers.

multiple roles

The need to wear all these hats makes for a complicated existence. Today's school principal has a most difficult job, and to do the job well requires the strengths of a field general, a philosopher, a psychiatrist, and a saint. In light of the general shortage of these strengths, it is not surprising that new teachers sometimes find themselves in conflict with their principals. Principals have to make many quick and difficult decisions, frequently with insufficient informa-

tion or time, and they are sometimes wrong. When principals observe in teachers' classrooms, they may appear to be there as *helpers,* but they cannot put aside their role as *judges.* At some time in the future, they must make recommendations about teachers to their superiors, and they obviously are influenced by what they have seen during their "helping" observations.

different priorities

Therefore, confusion and potential conflict between the administrator and the new teacher may be expected. For one thing, beginning teachers often do not know how to work in a bureaucracy (that is, make it work for their ends) and sometimes are antibureaucratic, or overly critical and complaining. This can lead them into direct conflict with their administrators, whose job is to train beginners in bureaucratic procedures but whose primary responsibility is to make sure that the school, as a totality, runs smoothly. Amid these many roles the administrator plays, slippage and breakdown can occur. The following account illustrates such a case.

CASE STUDY Steve Mellonwood/Junior High Social Studies

"During the special orientation meeting for new teachers, the principal told us all that whenever we have a problem we should come and see him. He didn't expect us to be perfect, and he felt his major job was to help new teachers. Later that week, he stopped me in the hall and warmly repeated his offer of help. I really took him at his word. So in early October, when I started having trouble planning and finding materials, I just went to see the principal. He was very cordial and, although he talked a lot about himself, he did give me some fairly helpful advice. I went to see him for three short visits. Just talking the problems out seemed to help. I started finding good materials, and my classes really improved. I felt I was really doing well, and I couldn't wait to get to school in the morning.

"Then, in early December, I started getting treated in an odd way by some of the senior teachers. They were always asking me whether or not they could help. Sort of like I had some incurable disease, and could they get me a glass of water. It was weird. Finally, I asked two of them in the lunchroom, 'Why all the concern?' Well, it came out that the principal had told them that I was having 'big trouble,' and he had told a number of the senior teachers to do what they could for me. He had not been in to observe me once. Later in the year he came in for two brief observations (to conform to minimum standards in our district), and he never had time for a conference. He did, however, write up supervisor conference reports. They were lukewarmish and had no specifics. He did mention in both reports that I was improving and overcoming early problems. What improvement? What problems? All he had to go by was what I told him. I got so mad that I wrote him a note to the effect that my self-reported problems had cleared up some time ago and that I felt my teaching was better than his report had indicated. I could see the handwriting on the wall, though. I started looking for another position, and got one without too much trouble. I liked the kids in my first school and many of the teachers. Somehow, though, early on I put myself in a box for the principal, and he wasn't going to let me out."

error of first impressions

An error of first impressions can also work the other way: the administrator who seems severe and distant can turn out to be warm and supportive, as described in the following case.

CASE STUDY **Victoria Klarfeld/Fourth Grade**

"Quite honestly, I was afraid of Mrs. Kelly when I first went for interviews. She seemed so businesslike and talked so much about high standards that I was sure that even if I got the job, I'd end up disappointing her. And after a few weeks with my fourth-grade wigglers, I was afraid I'd never get them to settle down and work on tasks. I was wrong on both counts. The kids settled down—some too much, so that now my biggest problem is getting them excited and alive. And, boy, was I really way off on Mrs. Kelly! She is a jewel! She has so many ideas and gives them to me in the nicest way. I never feel I have to use her suggestions, but in fact I think I've used every one.

solid professional support

"But what has meant the most is that she has treated me like an adult, a professional. Here I am, right out of college, and she is asking my advice about assembly programs and what to do about the cliques in our school. She has also made sure that the other teachers don't leave me out of things. I'm the only new teacher in the building this year, and they sometimes forget me. Mrs. Kelly has a great way of weaving me into things.

"I got very overtired and generally strung out after the Christmas vacation. I was depressed about my teaching and how little time or energy I had for any kind of social life. One day Mrs. Kelly intercepted me on my way to the lunchroom and took me around the corner to a sandwich shop. She knew exactly what was wrong with me and got right to the point, giving me super tips on how to organize my time and plan more efficiently. She even started me on a vitamin program that seems to give me much more energy. She has been terrific to me. She's made the year for me."

As the case above indicates, principals (and others who have supervisor responsibility over the beginning teachers, such as department- and grade-level chairpersons) can be a crucial source of professional expertise and moral support. In addition, research shows that supportive administrators actually help teachers to become reflective and solve their own problems.[3] But new teachers need to be proactive and not wait for the help to come to them. Among the potential kinds of help that administrators or supervisors can provide are the following:

types of help from administrators

- They may have valuable advice on dealing with specialized problems, such as an extremely reticent student.
- They can put you in contact with specialists in your building or elsewhere in the school district to help you on a range of issues, from curricular matters to dealing with disruptive students.
- They may be able to do demonstration lessons or special presentations in your class.
- They may be able to come to your classroom, observe you in action, and provide focused feedback on your early efforts to carry out a strategy such as cooperative learning.

While we suggest you seek help from administrators and supervisors, we also urge prudence. Do it honestly, directly, and somewhat sparingly.

Peers: A Mixed Blessing

New teachers are vulnerable to many outside forces and also to their own insecurities. If a supportive administrator can turn a potentially disastrous year into a year of growth, a beginning teacher's professional peers can be even more influential in the process of learning how to teach and how to survive in the classroom. The following example is a case in point.

CASE STUDY Annmarie Laney/Sixth Grade

"I had a hard time finding a teaching job. I had hoped to teach in my hometown, but there were just no jobs at the level I wanted to teach. The best job was on the other side of the state, and when it became clear that there were no jobs on the local horizon, I took it. I was very excited about teaching; I really felt that I was starting out on an adventure. I was, however, also moving away from my parents. Being so far away from home meant that there were lots of things that were going to be new to me. I had to get a car, an apartment, establish a bank account, and take care of lots of other things, and all at once. It was literally like a crash course in being an adult. And that's what I felt like right from the beginning: an adult. It was so different from college and even student teaching. At my school people treated me like an adult, and they expected me to act like one. For the first months I felt as if I was play-acting at being a grown-up. Well, now I guess the role is comfortable. Or maybe I just have my act down pat.

"Although I made friends with a few people in my apartment building, I was really very lonely at first. I don't think I would have made it without Joan Silver. Joan teaches in the classroom next to mine. She's been, as she says, 'in the trenches' for eighteen years, but she's got more ideas and energy and dedication than any of us fresh troops. Joan was a lifesaver for me. She took me under her wing even before school started. *emotional support*
She has been a source of ideas and a source of great materials and a source of inspiration. And she has never made me feel like a taker or a leech. And, actually, *I* taught *her* some things. That's one of the reasons I admired her so much. She really wanted to know about the new ideas I had learned in my education courses, and she put a lot of them to work in her class.

"I guess we talked every day after school. A lot of the time we just spent the hour after school laughing. A couple of times the janitor came in thinking there was something wrong, but what he found was the two of us broken up with laughter. And about once a month she would drag me home for dinner. Joan always seemed to know when I was a little low, and that's when she'd insist that I come home with her for dinner.

"There's so much to learn in the first year, and not just about subject matter. Important things—like how to get information from the school secretary and how to stay on the right side of the janitor—that you can never learn in education courses. Joan was my guide on everything from how to fill out my planbook to which memos from the front office I had to pay attention to and which I could put in what she called the 'circular file.'

"It seems funny to say this, given the fact that Joan is twenty years older than I am, but I really think she's my best friend. She certainly has made this year a terrific one for me."

What Can the New Teacher Expect?

Well, in California, You Can Expect $5000 Worth of Help!

If you are worried about being isolated in your classroom with twenty-three third-graders who can't seem to fit into that terrific reading center program your cooperating teacher demonstrated so well for you during your student teaching, never fear. There is help on the way—at least if you are going to teach in California, Kentucky, Mississippi, Wisconsin, and several other states, plus a number of school systems, that have made a major commitment to the induction of new professionals.

For twenty years, California has been a leader in professional teacher induction programs. Our most populous state expects to hire over a quarter-million teachers in the next five years to teach its 6 million students. To launch them on their new careers, California has a statewide mentor program (with an annual budget of $80 million) and a new Beginning Teacher Support and Assessment Program (annual budget, $75 million). These programs are targeted at first- and second-year teachers and are closely geared toward helping new teachers to help their students reach the newly adopted statewide student achievement standards. Underlying these programs are two building blocks: the development of a common language about teaching between new and veteran teachers and a common set of thirty-five scales to describe teaching, aptly called Descriptions of Practice. These scales are quite specific and observable, and therefore form the basis for down-to-earth discussions of how to improve classroom teaching.

As you can see from the numerous references and suggestions throughout this chapter, we strongly believe that your fellow teachers, your new colleagues, can be a tremendous source for your growth and development as a professional. In fact, they can be a gold mine of tricks of the trade on issues such as how to get students' attention and how to keep it; how to use your new school's PCs when you're MAC trained (or vice versa); how to lead a discussion and actually take it somewhere; how to organize your classroom for effective learning; and how to get those three girls in the back to stop giggling and passing notes. While your own initiative in getting to know your fellow teachers is important, the advent of programs for new teachers is good news indeed. More than just tea and sympathy (or a stapler and an aspirin), these new programs hold the promise of dramatically altering the rocky roller-coaster life of first-year teachers.

Source: Margaret Olebe, Amy Jackson, and Charlotte Danielson, "Investing in Beginning Teachers—The California Model," *Educational Leadership,* 56, no. 8, May 1999, pp. 41–44b.

colleagues more accessible than principals

Although there is increasing cooperation among teachers and greater access to specialists and aides, for the most part teachers work independently, in their own classrooms and with their own students. When they are engaged in their professional work, they typically are isolated from one another. However, although administrators are the official source of support and help for beginners, fellow teachers are a much more accessible and less threatening source of support. As the preceding case illustrates, a teacher's colleagues can be a powerful influence, especially in the beginning. They can be an ever-ready source of ideas and teaching tips, and can initiate the newcomer into the customs of the school. Like Joan Silver, a peer can be an inspiration and show by example what the phrase *teacher as professional* means.

KEVIN: *Are we in danger of giving the impression that all teachers struggle through an unhappy survival?*

JIM: Come to think of it, we probably are.

KEVIN: *Then we ought to correct it. Many teachers are quite skillful when they begin their careers. They have enough ability and training to perform at a high level of competence.*

JIM: As a matter of fact, I have known a few.

KEVIN: *Yes, so have I. The only problem for the ones I have known was that some of the older teachers became jealous.*

JIM: Yes, teachers share human nature, too.

possible negative influence

On the other hand, other teachers can have a negative influence, undermining a beginning teacher's idealism, lowering his or her standards, and offering no help at all. The teachers' lounge is sometimes the venue for serious disillusionment. Many teachers use the lounge to "unwind." Unwinding often involves harsh criticism of students, mockery of administrators, and negative comments about teaching. Although not especially different from similar "off-camera" remarks in hospitals and businesses, such comments in the teachers' lounge can blunt the new teacher's idealism and enthusiasm. The lounge is a source of much learning for beginners, but in some cases the private side of colleagues can be a rude awakening for them.

Although we strongly believe that the teaching profession has a larger percentage of dedicated, selfless people than any other profession (except, perhaps, the ministry), it also has its share of rogues and fools. Beginners should pick their way carefully among this field of new colleagues.

Instruction: So Much to Learn

children's success most important

Ultimately, a teacher's only real problem is his or her students' failure to learn and to develop. All other conflicts, triumphs, and defeats pale in significance if the children are learning and developing their human potential. The degree of the children's success as learners is the best measure of a teacher's success or failure. Although the closeness of the relationship between a teacher's instruction and a student's learning is frequently overstated, this relationship is crucial. Teacher effectiveness is an area in which there are few naturals. New teachers generally have much to learn in this area of instruction.

One major difficulty is the sheer newness of the role of teacher. After a little student teaching, you suddenly find yourself totally immersed. You are in charge of your own class and responsible for taking it from the first day of school to the last. One particularly vexing problem for the beginning teacher is the search for effective curricular materials, as the following example illustrates.

In this class, a new teacher's creative lesson on DNA is paying off in student interest. (© Bob Daemmrich)

CASE STUDY Betty Dewey/Third Grade

"The overriding question of this year has been 'What works?' I'm in a constant search for materials. It is never-ending. My kids aren't especially brilliant, but they devour material and look at me as if to say, 'Well, what's next?' Our school's curriculum guide is only five years old, but it is terribly dated. The students know a lot of the stuff already. They learned it in lower grades or just picked it up. They are bored by a good bit of the rest, too. I'm constantly squeezing ideas and tips from the other third-grade teachers. They are helpful, but they are in the same boat I am. Sometimes I get a big buildup on a particular workbook or special unit by a teacher who had fabulous success with it. I try it and I fall on my face with it. Then there are the kids. They are so fickle! A couple of times I took their suggestions on things they wanted to study and work on. After much work and many late hours, I'd get these classes prepared and the very same kids who were so anxious to make the suggestions couldn't have cared less.

"My school district has curriculum specialists. Some of them are very good, too. Particularly the math specialist. He would give me *too* much material. I'd spend hours deciding about which approach to use to teach ten minutes' worth of material. The language arts specialist was a sweet lady but very rarely available, and most of her ideas were really out to lunch. I was on my own there. When you get right down to it, you have to make the curriculum and the materials *yours* before they are any good to you. Someone else's great materials are nothing until you have made them your own. This is hard to do the first year."

"owning" your own materials

Though the curricular and instructional aspect of teaching can be a thicket of difficulty for many beginners, for others it is very exciting and inspiring.

CASE STUDY Tom Middleton/Middle School Social Studies

"School has always been hard for me. But then again, if the truth be known, I've always worked hard. In high school I really got turned on to history, and I think it was then that I decided to become a teacher. In college I took every history course I could. I was way over the required number of history courses for certification. And I was lucky to teach at a very academic high school as a student teacher. I think I did well, too. At least that's what everyone said. I was really disappointed when I couldn't find any openings as a history teacher. I was getting very discouraged until I was finally offered a middle school job in the same school district where I had student-taught. My first thought was to let it go and wait for a 'real' history job. What they wanted me to teach was social studies. There was some history involved, but there was also a lot of other social science material to teach. What I really wanted to teach were the intricacies of the British parliamentary system and the rise and fall of Oliver Cromwell, and what they wanted was what seemed to me pretty low-level stuff. I was ready to hang it up. I could possibly work for the company my dad works for, or I could go back to school. Well, anyway, I decided I'd give middle school teaching a chance.

"The great surprise of teaching for me was not the kids or anything like that. It was, on the one hand, how little I knew about my strength—history—and, on the other hand, how intellectually exciting teaching in general can be. I had taken dozens of history courses and considered myself a super buff, but I had missed the essential meaning of history. That's what I have been learning these first two years, and it has been as stimulating as anything in my life. Now I feel I'm just beginning to understand the purpose of history and what should be taught. I came to teach and probably ended up learning more than my students.

"Incidentally, I was offered the position I thought I really wanted, a position on the high school history faculty. I turned it down. I couldn't be happier than I am here."

relearning one's subject

The love of nurturing and observing growth in others is essential to sustaining a life of teaching. This implies that no matter what you teach or how you present yourself to your students, you have to be on the learner's side and to believe that they can and will grow during the time that you are together.

—HERBERT KOHL

Students: Friends or Fiends?

Becoming comfortable and sensing that one is effective with children is a major concern for a new teacher. And well it should be: students are the main event! They make the good days good and usually make the bad days bad. The relationship between teacher and students is multifaceted. An important aspect of the relationship is based on how well the students are achieving.

CASE STUDY Edwina Bellatre/Fifth Grade

"I have enjoyed my students this year, probably more than I should have. It was a tremendous kick to have my own class. I was very worried about discipline. I think I jumped on the students so much in the first three weeks that they were shell-shocked until Thanksgiving. But I loosened up, and so did they. I've really liked the whole experience of being a

It's not what the teacher does that's important. It's what the teacher gets the children to do.

—PHIL SCHLECTY

Case Study cont'd

teacher. And I've worked hard. It seems that my whole life this first year has been school.

a moment of panic

"The one real down moment I had came right toward the end of the year. Something one of the sixth-grade teachers said really shook my confidence. She made some comment at lunch about how much fun-and-games was going on in my class. All of a sudden I began thinking that while I was having a great time—and maybe the kids were having a great time—they really weren't learning anything. I tried to think what I had taught them that was really important, and my mind was blank. I tried to think of particular students who I thought had really shown a lot of progress, and I couldn't think of anyone specific. I went around that way for a couple of days, and I got sort of panicky.

realization of student progress

"Finally, almost by accident, I came across one of the student's notebooks, which had all of his work from September, even his diagnostic tests. It was really enlightening. I could almost see the change from week to week in what he knew. The problems became more difficult, but he could master them. His compositions became more interesting, and the mechanics became sounder. His handwriting looked so much more mature. I figured, though, that maybe that was just one student. I asked to look at a few other students' notebooks, and there it was. They had changed. They were different. Not just different, but *better*. And I was an important part of that change."

There can be little doubt, however, that although students are the primary source of a teacher's success, they are also a source of failure. Three areas in particular cause problems: discipline, social distance, and sex. Behind each of these areas of difficulty is an inaccurate set of expectations the teacher holds about children.

One indication of these out-of-line expectations is the sharp change in attitudes people experience as they go through teacher education and into their first years of classroom teaching. Studies have shown that the longer college students stay in teacher education programs, the more positive and warm their attitudes toward students become. But among beginning teachers, positive attitudes toward students drop sharply. In fact, beginning teachers score significantly lower on attitude inventories than students just entering teacher education.

changing views of children

Why does this happen? Before going on, jot down some hypotheses about why beginning teachers' attitudes change in this way.

Sources of a Distorted View

Our experience in working with college students (for more years than we care to report) convinces us that most students who are preparing to become teachers have high ideals in general and become particularly idealistic about children and

© James Estes

education during their preparation. They believe that as teachers they should have warm relations with students, and they want to make the classroom more relaxed and more responsive to the needs of students than it normally is. As college students take more education courses and observe in classrooms, their views of children become more idealistic and, as a result, more positive. By graduation, the rose-colored glasses are firmly affixed.*

idealism

Also, college students have managed to shut out memories of many realities of their own childhood and adolescence. They forget things like the time they joined with the other seventh-graders to put four tacks on Miss Derriere's chair.

skewed view of students

*This analysis does not, we fear, account for the Lundquist Effect, named after our good friend Ernie Lundquist, whom you will hear from later in this chapter in the section on parents. Ernie deviated (as was his habit) from the normal. As Ernie progressed through teacher training, he began to dislike children more and more. By the time he graduated, he had a well-developed distaste for, as he called them, "the little creeps." But having few options and even less imagination, Ernie went ahead and got himself a teaching job. Failing at this, he quickly became an administrator. However, Ernie found sitting in his office quite lonely. The only people who came to see him were the children. As Ernie talked to the children about what his school was really like, he gradually came to like, and eventually love, the little creeps. But, on the other hand, as for the teachers . . .

They blot out all the juicy stories, most of which they knew were untrue, about the young home economics teacher. They forget about how they enjoyed reading (writing?) obscenities about their math teacher on the lavatory wall. They forget how cruel kids can be to kids. Somehow the dark side of human nature recedes from view during teacher education. But fear not: it reappears. Beginning teachers rediscover human fallibility, in their children and in themselves, and all too often the sad result is that their positive attitudes toward children plummet.

Normally, positive attitudes make a comeback, although they rarely regain the heights they reached during the latter stages of teacher training. Nevertheless, the beginner's unrealistic expectations are a great source of his or her problems. And although problems of this kind abound, we will look at just the three areas mentioned earlier: discipline, social distance, and sex.

Discipline

Classroom management, classroom control, or discipline (pick your euphemism) is one of those problems that shouldn't exist. After all, school is an opportunity for children. The teacher works hard to help them. It's simple: the teacher is there to teach, and students are there to learn. Unfortunately, though, things do not work out that way.

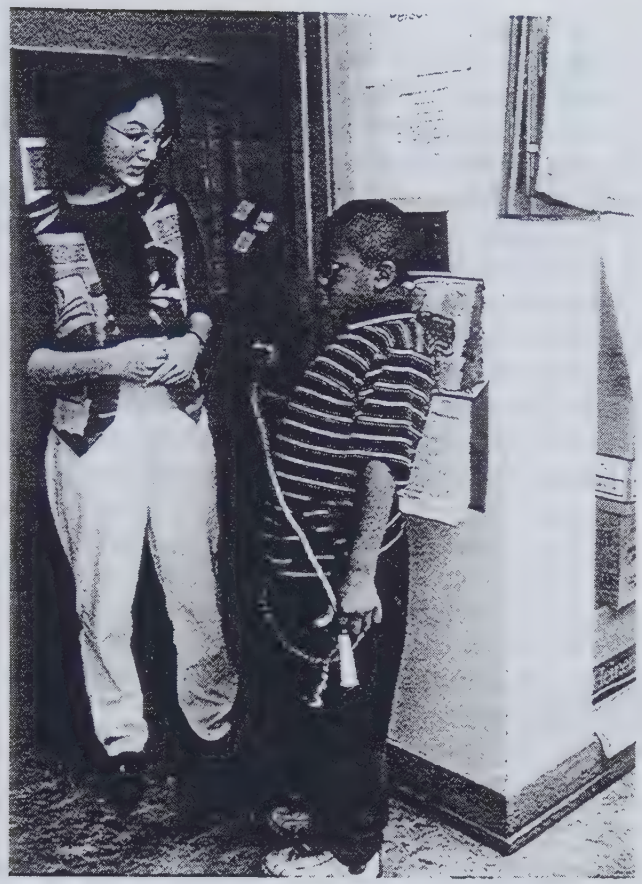
students expect discipline

The great majority of schools, whether kindergartens or high schools, are organized with the expectation that the teacher will be "in charge" of the class. You may not like this, and there are things you can do about it. But it is still what is generally expected of a teacher by the children, the administration, and peers. (We will return to this matter of expectations in the section on social distance.) Few (and lucky) are the teachers who do not have to come to grips with their role as disciplinarian.

Unaccustomed to Being in Charge A discipline problem occurs when the expected pattern of classroom behavior is violated. Normally, a breach of discipline is an overt act by one or more students that distracts attention from or interrupts the performance of the task at hand. Few college students have had much opportunity to be "in charge," to give orders, to coordinate the activities of a group of people, or to say such things as "Quiet down" or "Stay in your seat!" In particular, many young women are still somewhat unaccustomed to leadership roles (although this has been changing in recent years). Students, on the other hand, are accustomed to being taught by experienced teachers who know how to control them, usually rather effortlessly.

lack of leadership background

Students can sense uncertainty and hesitancy in a new teacher. Moreover, school is not fun-and-games for children. They can get restless and bored. (Remember how long the school day was when you were in elementary and secondary school: how long you had to sit still at a stretch and how much you had to do that didn't interest you.) These conditions, plus the potential for friction in any group of so many people, make it almost inevitable that first-year teachers will have some trouble establishing the kind of productive relationship with students that they seek.



Sometimes a little "one-on-one" can clear up a discipline problem. (© Elizabeth Crews)

As we have implied, many new teachers start out with a rather idealized picture of children as victims. They assume that misbehavior is a result of some condition external to the child, such as a disruptive home life or poverty. Often there is the suggestion that something in the teacher's class provokes or brings forth the problem. If only the teacher would "establish the right environment" or "reach out to the child in just the right way," the problem would be solved. This view is a subset of a larger view that people are not capable of evil, only social arrangements are capable of evil—an idea that had many adherents in education at one time and still has some advocates today. This idea that all children are innately good, combined with the first-year teacher's insecurities and search for approval, makes it difficult for many to deal confidently with their role as disciplinarian.

CASE STUDY Carole Green/Fourth Grade

"I was convinced that a good class was a happy class and that I wasn't going to be like those grouchy teachers I remember from my own elementary school. So, in the first part of the year, I let a lot of small infractions go unnoticed: talking during silent reading period, lateness on assignments, yelling out the window to students on the

faulty assumptions

Case Study cont'd

playground, and the like. It was a little hard on my nerves, but I thought I was establishing an open and creative environment. It soon became clear that it was open, but not particularly creative. In fact, I first discovered reality when a friendly parent suggested that the room was too noisy and disorderly for the children to get their work done. I tried to 'tighten up,' but the students were already used to my 'open and creative' environment. I just couldn't get them to settle down.

"Finally, the straw that broke the camel's back—and almost broke mine—was when the principal came in to observe. The kids behaved horribly. I felt as if they were trying to make me look bad. Whatever their intentions, the situation was not lost on the principal. During the follow-up conference, he was very frank with me, telling me that if I couldn't maintain better discipline, he might have to 'relieve me.' One thing I particularly remember him saying was 'Carole, if you can't *keep* school, you can't *teach* school.' Then he gave me some specific suggestions. Even with those good suggestions, though, I had a very difficult time working my way back in charge and establishing a more civil and orderly classroom."

Kevin and Jim's Guide to the First Day of School

1. *Teach your very best lesson.* Often teachers use the first day for filling out forms, assigning lockers, and essential but boring "administrivia." Such a day can set a tone for the students that this is going to be just like all the other years, like all the other classes. On the other hand, students will be fresh from the summer, carrying renewed expectations that this year may be different. Capitalizing on this attitude with a really interesting lesson will create important momentum for your class. You can catch up on the forms and other items later in the week.
2. *Establish class rules and procedures.* Although a good lesson is most important, getting classroom management under control cannot be stressed too much. On the first day, at least, let your students know you plan to have an orderly classroom with rules that foster respect and a healthy work environment. We do not imply that you lay down the law, but that you let your students know that any group needs to have clear rules and you are open to their suggestions or even codetermination of the rules.
3. *Start learning and using students' names.* As soon as you receive your class lists or rosters, start familiarizing yourself with the students' names. Once you meet your students, start matching names with faces, and, whenever possible, use their names. Nothing signals your interest in them and being on top of the situation like using their names on day 1.
4. *Be friendly but businesslike.* Often the insecurities of new teachers get the best of them. They vacillate between being Mr. or Ms. Nice Guy and Attila the Disciplinarian. The beginning teacher's early commitment to a friendly but task-oriented atmosphere is the key to its realization.
5. *Share with students your vision for the year ahead.* Students want to succeed. Even the ones with a history of difficulty with other teachers want the new school year to be better. Don't tell them how hard they are going to work. Tell them how much they are going to know at the end of the year and what they can do with this new knowledge.
6. *Establish procedures for communicating with parents.* You need parental support, and students want to know whether you'll contact parents about both good and bad events. Tell them you see their parents as your partners, as your coteachers.

Social Distance

Establishing an appropriate **social distance** from students occupies a good deal of a beginning teacher's attention and energy. Like disciplinary techniques, a correct social distance does not come with a teaching certificate or one's first job. Beginning teachers frequently take refuge in the two extremes of behavior. Many hide their insecurities by acting harshly strict and extremely businesslike, sometimes bordering on hostile. Others attempt to be completely "natural." They reject the stiff, "teacherish" image and seek to break down all barriers between themselves and their students. The first extreme, the overly strict teacher, can give rise to long-term difficulties, whereas the "natural" teacher usually has short-term problems.

overly strict behavior

The problem with playing the role of the overly strict, aloof teacher is that it may become a permanent habit. Acting like a Prussian officer may appeal to a hidden need to make others submissive. Also, one may begin to believe that "a quiet class is a good class."

overly "natural" behavior

The problem confronting overly "natural" teachers is that their view of natural behavior often clashes with the children's. The students expect their teacher to interact with them in certain recognizable ways; that is, they expect a certain degree of social distance. They are confused or put off when the teacher acts like "one of the gang." The crux of the problem, then, is that the beginning teacher often wants to be a friend or a pal, whereas the students expect and want the teacher to be an adult. Because they are uncertain and striving to be adults themselves, students seek strength and maturity in their teachers. Often they interpret the beginning teacher's efforts at naturalness and informality as weakness.

CASE STUDY Jane Candis/Seventh Grade

"Most of my year was spent alternating between being Wanda the Witch and sweet little Miss Muffet. I started out determined to be different from all those cold teachers I had had. I was going to be everyone's sweet Big Sister. I really was surprised when this didn't work. The children didn't respond. If anything, they seemed to be confused. Some of them started treating me like their big sister, and I found myself getting annoyed. They became very familiar and started asking me all sorts of embarrassing questions, both in and out of class. The final straw came when one of my boys—one of my favorites, too—came up to me in the hall while I was talking to a senior teacher. Smiling, he patted me on the back and said, 'How's it goin', Miss Candis?' I was mortified.

"After that little incident, I became tough. I was all business. If anyone got close to being familiar, I cut them off at the knees. I really said some nasty things. I was just so uptight that I overreacted. I guess I was hurt that my Big Sister routine didn't work. Later I realized that one reason behind my wanting to be Big Sister was simply that I wanted to be loved, at any cost. I guess my insecurities led me to seek love from my students. Anyway, I spent most of the year going back and forth on this issue—one week Wanda and the next Miss Muffet. It was really a strain, for me and the kids. Finally, toward the end of the year, things began to straighten out and I stopped playing a role. It was much more fun that way. I think everyone was relieved."

first-year insecurities

Sex

teacher-student attraction

Sexual attraction and romance between students, and even between teachers, is alive and well in the American school. And most people recognize this. But the idea of sexual attraction or romance between a teacher and a student wasn't talked about much, at least until the 1990s, when films like *The Election* and the celebrated case of Mary Kay LeTourneau, a thirty-four-year-old Seattle teacher who had two children fathered by a fifteen-year-old former student, brought the issue into the light. Nevertheless, sex between students and teachers generally remains a taboo subject.

Beginning teachers are more likely than experienced ones to confront this problem. For one thing, they are nearer in age to the students. For another, they are often single, new to the community, and lonely. The strain of the new job may increase their need for affection, and this need may find expression in their relationships with students.

In the same way, students often become attracted to their teachers. They sometimes get what is best described as a "crush" on their teachers, becoming emotionally attached to them, greeting them eagerly in the morning and walking them to their cars after school. This too can be a very awkward situation in that the student wants to be treated as special and to feel the affection is reciprocated. If the teacher rejects or embarrasses the student, the student can be hurt deeply.

Besides the platonic attachments teachers can form to young children, a twenty-two-year-old teacher quite conceivably can find a sixteen-year-old student sexually attractive. Thus, as the following account indicates, high school teachers are particularly vulnerable to sexual attraction or manipulation. Our only advice in this area is an emphatic *don't.*

CASE STUDY Gary Cornog/English

"In one class there dwelt a fair young creature who found me to be an easily flustered appreciator of her many charms. She was a coquette and, to my way of thinking, a dangerous one. She had me at a great disadvantage. While she could liltingly ask special favors of me (such as my continued toleration of her misbehavior in class), I could not cope with her in anything like a spontaneous way. Unless I was in a phenomenally commanding mood, I could expect to hear such daily entreaties as 'Oh, Mr. Cornog! Mr. Cornog! Could you come here and help me?' 'Mr. Cornog, I just don't understand!' (All this spoken in a voice of tender urgency.) She would have her left arm raised, her right arm aiding it, and would be leaning forward and upward from her desk so that (I thought) I would not fail to notice her finer endowments (I didn't).

"'What is it, Julie?' I would reply, hoping the fear in my heart would not be evident in my voice. It nearly always was.

"'Mr. Cornog, there's something here I don't understand. Could you come here and look at it?'

"*Don't,* I tell myself. *Don't.*

Case Study cont'd

"'Read it to me and I'll explain it.' (*From here,* I almost added, but that would be too obvious.) No. She's getting up.

"'I'll bring it up there.'

flirtation

"She approaches. She arrives at my left side. I note a scent of lemony perfume; an attempt at makeup about the eyes. She leans over to place the book in front of me, and some of her long dark hair grazes my shoulder. By this time I feel thoroughly unwilling to answer any question regarding syntax. *What about private tutoring?* I hear my lecherous innards suggesting. Heaven forbid! My frustration causes me to blurt a response to her query, hoping that she'll return to her seat. The class by this time has observed me melting into a limpid pool behind the desk. She must be smiling triumphantly above me, her glory reflected in my devastation. If only she had been as innocent of malice in her manipulations as I had been tender in my innocence, then all would have been well. Alas, she was not. She thought it great sport to exercise her arts for the benefit of her friends, and I could think of no way to break the spell. I could not ignore her, because then the class would notice my attempt and think that she had really gotten to me. I could not allow her to continue to dominate me, for then the respect I sought would never appear. Who could respect a hen-pecked English teacher? The befuddled teacher doing battle with the temptress every day—what a tableau! What a cliché. It pained me to see myself in such a humiliating posture. It was so absurd."[4]

Some first-year teachers become terribly discouraged by their relationships with students. Most of us teach because we like young people and want to work with them. When we are rejected or make fools of ourselves, it is painful. Most problems with students are a result of inexperience, and the majority of second-year teachers find that most of their previous problems disappear and they feel very much at ease with their students. Developing satisfying relationships with students usually involves some initial uncertainty. However, previous experience with children as a camp counselor, settlement house worker, or tutor can ease the transition. Contacts with children and adolescents before beginning teaching help you learn about how you relate best to children.

experience as authority figure helps

Parents: Natural Allies with Different Agendas

The parent and the teacher are natural partners. Both are working to help the child become a more fully developed person, and both want the child to be happy, sensitive, intelligent, and well balanced. Frequently, though, the relationship between teacher and parent runs amok and the natural allies become antagonists. Instead of devoting their energies toward understanding and aiding the child, they waste them on conflict with each other.

shared goals

The great majority of parent-teacher conferences are cordial, constructive, and characterized by mutual respect. Although there may be initial problems of perception or communication, the parents' and teacher's shared interest in the child

is enough to overcome these minor blocks. However, problems do develop—and they are not always the fault of the parents.

CASE STUDY Walter Connor/History

"In the late winter, we had our annual parents' night. All the teachers were to work with students on displays and projects. And, of course, we had to get lots of student work up on the board. The drab old school building looked like the Rose Bowl Parade by the big night. We met the parents in our rooms and gave them an overview of what we were doing for the year. I thought I would be nervous, but somehow I wasn't. I was so distracted and fascinated by their faces. I never suspected that they would look so much like their kids! Or vice versa.

"When I finished my talk, I handed out folders of the children's work and told the parents I would be happy to talk with them individually. Most of my students had been doing fairly well, so most of the evening went well. The parents of my two prize ding-a-lings didn't show, an event I greeted with mixed emotions.

"One set of parents hung back. I hadn't met them yet, but I knew immediately who they were. They were Bill Russell's parents. Bill is a great big happy kid. He is not bright, and he is quite lazy. All he likes to do is play his guitar, which he is pretty good with. The only time I have gotten any work from him was during a unit on the Civil War. I persuaded him to look up the folk songs and marching chants of the Civil War. He gave a 'singing and strumming' report to the class. But after that, nothing! Bill was carrying something between a D and an F at that time. Well, the Russells asked a lot of questions, and I stayed with the straight-facts-no-sugar-coating approach, which I was convinced was the right approach. Then Mr. Russell glanced anxiously at his wife, looked over his shoulder to see that none of the other parents was within earshot, and said, 'Tell me, Mr. Connor. We're both college men. My son, Bill: is he . . . you know . . . college material?'

"I didn't know what to say, so I said, 'What do you mean?'

"'We just want to know if we should be saving to send him to college. Is he . . . you know . . . college material?'

"All I thought of was that here was a guy who really wanted a straight answer, so I said, 'Well, no. I don't think so.' Then I looked at Mrs. Russell. I should have looked at her before answering. After the tears came the hostility. 'How dare you prejudge my boy! Admit it, you don't like Bill. You are trying to ruin his chances. We work hard to raise our only son, and then some young know-it-all teacher ruins everything!'

honesty to a fault

"Underneath the hysteria, which subsided in about five long minutes, she was right. I was way off base. I had no right to make that judgment. I had known their son for a half-year in one course that clearly didn't interest him much. I didn't have enough data. Well, I made another appointment with them. During that meeting, I saw that frightening intensity behind their desire to get my class's number-one guitar player into college. Some good things came out of this conference. Bill's work picked up. He actually ended the year with a C. I was the one who learned a good lesson, though. Wanting to be honest doesn't mean arrogantly abandoning good judgment."

The sources of teacher-parent problems are the same as those involved in any human relationship, but encounters are more highly charged than in most relationships. This is to be expected because a child and his or her future are at issue.

The following account of Brenda's mother and a new teacher illustrates some of the dynamics that are usually hidden from view.

CASE STUDY **Ruth Billsbury/Sixth Grade**

"It happened in late March. Ten days earlier, Brenda's mother called me. She said she wanted to talk to me and asked if there was any day that I stayed late at school. She didn't get off work until 4:30 and couldn't make it to school until 5:15. I often worked late at school, and so I made an appointment for ten days later.

"I was curious about why she wanted to see me, and I began to worry. Brenda had something of a reputation in the school. In September, during the teachers' workshop before the opening day, two teachers 'sympathized' with me when they heard I had Brenda Carson. They didn't go into great detail why, and I didn't want to ask. However, I was watching Brenda out of the corner of my eye during those first months, and I guess I paid particular attention to her. In recent months, I hadn't thought much about her—until her mother called.

"Brenda's mother showed up right on time, and after a few pleasantries she said, 'Well, I know you're busy, so I'll come right to the point. Three weeks after Brenda started kindergarten, Brenda's father and I separated. After a terrible on-again, off-again year, we decided to get a divorce. It was hard on both of us, but it was crushing for Brenda. She's an only child. Maybe she blamed herself for the breakup. I don't know. In any event, she went into a kind of tailspin. She was trouble at home, and she's been in trouble in school almost from the moment of the breakup. She's no genius, but she's bright enough to do better than she's done. She just dug in her little heels and wouldn't try. She wouldn't bring books home. She wouldn't do assignments. Every time I asked her about school, her standard answer was "I hate school." Once I got working and my life started to settle down, we were able to make a life together. But the school situation was still rotten. None of the other girls played with her. She was never invited to any parties. I even suggested that she invite one of her classmates to stay overnight one Friday night, and the kid refused. We were both heartbroken.

effects of divorce

"'Then you came along. I don't know what you did to her, but you certainly have turned her around. I sensed it the first day of school. She came home with a funny look in her eye and said, "This year is going to be different. I can just tell." She wouldn't say why, but after a few days I guessed. She was continually talking about you—from what you said to her to what kind of car you drive. Honestly, one weekend when we were out grocery shopping, she made me drive by your apartment, she was so curious to find out what it looked like.

unexpected praise

"'And I guess you know how she's doing in school. I don't think she's missed her homework once. I'm sure she's not your best student, but I know she's doing pretty well, particularly considering the hole she was digging for herself. You look surprised at all this. I figured you might be. Brenda can really keep her feelings to herself when she wants to. But honestly, you have touched that girl in a special place. The difference in her is like night and day. You can't imagine what all this has meant to me. Her pain was my pain, and now it's gone away. Brenda even has friends now.

"'Anyway, I just wanted you to know. I just wanted to see you and to thank you.'

"Brenda's mother was out the door before I could respond. It was so unexpected; I don't know what I could have said anyway. That one event has given me a great, great deal to think about."

Reasons for Parent-Teacher Problems

The two case studies you have just read illustrate a number of reasons that parents and teachers may have a difficult relationship with each other or even fall into direct conflict.

differences in perception

1. *Varied perceptions.* Teachers and parents are quite likely to perceive the same phenomenon in very different ways. The nerve-frazzled teacher perceives a child as a wild, undisciplined, raucous menace. The parents perceive their child as energetic, spontaneous, and sociable. An apparently quiet, shy child may turn out to be a chatterbox in the security of home.

evaluation: a sensitive area

2. *Judgments on students.* Evaluation is another area of difficulty. It is part of the teacher's job to make judgments about a child's performance, a process that can touch on some deep insecurities. It can wound the parents' hopes and aspirations, particularly in this age of anxiety when parents see education as their children's royal road to success. In our competitive society, being average is taken by some as failure. For these reasons, the teacher needs to be especially sensitive when dealing with issues of evaluation and would do well to stay away from judgments such as students being "above average" or "below average" or comparing certain children with other students.

social class and communication

3. *Differences of social class and experiences.* Issues of social distance have been at the hub of much parent-teacher antagonism in recent years. Since most teachers are middle class or aspiring to the middle class, they normally have little trouble communicating with middle-class people. But when they deal with parents from a lower or higher socioeconomic class or a different ethnic group, or both, the potential for communication difficulties heightens. Upper-class parents can look down on public schools and treat teachers condescendingly. Poor parents often have had unfortunate and unpleasant experiences with schools and, as a result, regard them with suspicion. Often these parents speak a different language or dialect than the teacher. What the teacher sees as a humble classroom is to them part of a huge, impersonal bureaucracy. In many urban areas, this impression of the school as a cold, unfriendly, and impersonal institution is supported by the evidence: the school doors are locked, and parents have to pass by police officers and assorted hall guards before receiving a pass to see the head secretary in order to see the teacher. The fact that many lower-class parents, as children, encountered prejudice in schools and found attendance at school more discouraging than helpful makes communication even more difficult.

mothers in work force

4. *Overburdened parents.* Another factor, as we note in Chapter 5, is the changing American family. Increasingly, mothers—who, in an earlier era, stayed home, kept house, and guided their children through school—are joining the work force. Currently, the great majority of women with school-age children work outside the home. The U.S. Department of Labor projects that by the year 2005, 80 percent of married women with children will be in the work force. Usually it is very difficult for working mothers to get off work to meet with their children's teachers or attend PTO meetings and after-school functions that would

put them in closer contact with teachers. Often these events are unwelcome chores in an already stressful life.

5. *The pain of change.* Finally, going to school changes children. School, in fact, exists to help children change in specified ways: to read, to speak a foreign language, to solve problems. And students do change. They master things. They acquire confidence. And they become increasingly independent of their parents. Some parents rejoice at their child's growing freedom from them. For others, this process of independence is painful. Hearing her little girl talk about how much she loves her teacher may arouse jealousy in a mother and cause her to act hostile when she meets the teacher. When a high school student comes home from school with political, social, or religious views that conflict with those of his parents, resentment and confusion can result. Thus, it is not uncommon for a parent to approach a conference with the teacher with a sincere mixture of appreciation and hostility.

students' independence causes pain

Surviving the First Year of Teaching

When one of the authors was about to begin his first year of teaching, his battle-scarred department chairman cryptically commented to him, "Promise yourself today that you will teach a second year." At the time, the meaning behind the remark was unclear. However, after the emotional yo-yo of that initial year had taken a few swoops and plunges, the meaning came into sharp focus. A person's first year of teaching is too unusual, too filled with extremes and emotional highs and lows to provide a sound basis for deciding whether or not teaching is the work on which one wants to spend one's life. Nevertheless, a whopping 30 percent of teachers leave the profession within their first five years,[5] presumably many of them first-year teachers. But statistics do not determine personal fate. Experienced teachers know that a novice teacher can do much to overcome or at least mitigate the problems of the first year of teaching. Andy Baumgartner, who was voted National Teacher of the Year in 1999, summarizes a great deal of valuable advice in his "Ten Commandments for Successful Teaching":

commit for two years

excellent suggestions from an excellent teacher

1. Make learning fun!
2. Enjoy the job of teaching or change your situation so that you will!
3. Speak out positively about the profession! Be honest about the concerns and praise the successes!
4. Look for the rewards in teaching on a daily basis! Give yourself a pat on the back for even the smallest of victories!
5. Care about the students! Appreciate their company! Advocate for their well-being! Treat them with dignity!
6. Stay clear of the watering holes frequented by the "old buffaloes" and the "naysayers"!

7. Don't be afraid to fail! Be willing to constantly try new things and to learn from mistakes!
8. Have a life outside of teaching! Play as hard as you work! Gather family and friends around you for support!
9. Find a mentor and a confidant who is trustworthy, and save all "soul baring" for that person!
10. Persevere and don't give up! In education, there are always second chances!

Let's look at some of these ideas more closely.

Begin Now

start to work on yourself

First, start now to prepare for the predictable events and problems of the initial year. Make a systematic study of your strengths and weaknesses, with an eye toward using those strengths in the classroom and gradually eliminating your trouble areas. For instance, if you have an especially good reading voice, plan to capitalize on it as a teacher. Students from preschool through college love to be read to. On the other hand, if you are painfully self-conscious and shy, develop a plan to overcome this shortcoming. Don't try to defeat your shyness with big, dramatic gestures, such as trying out for the lead in the college play. Take an incremental approach, using small steps. Plan to speak to someone standing in line next to you whom you don't know; volunteer answers in class. With problematic areas like this, but also with your strengths, seek the advice and help of trusted friends, family, and teachers. Realize that your shyness may never completely go away, but you will gradually feel more and more comfortable speaking and working with people if you push yourself to make small advances regularly.

Keep a Teaching Journal

benefits of a journal

A **teaching journal** can be any notebook that is large enough to hold your teaching thoughts and suggestions. Or, if you prefer working at a keyboard, a computer file can serve the same purpose. Although some teachers started such books in grade school when they first decided to teach, the beginning of one's formal preparation as a teacher is a very good time to begin a journal.

A teaching journal can be used to record all the useful ideas and strategies you discover, saving them for the time when you are actually teaching. It can include teaching skills learned in lectures or observed in the field, such as how to grade papers effectively or how to give students evaluative feedback on in-class presentations. In addition, it could include methods of disciplining in different situations, easy and efficient ways to take attendance, ways to present particularly difficult concepts, things to do when students get restless or overexcited, and sources of good curricular materials.

Having such a journal serves two functions. First, the teaching journal is a constant reminder that you are preparing to be actually in charge of your own classroom (a fact that often is not in sharp focus for preservice teachers). Second,

the journal can be a lifesaver when you are struggling during the first year. A typical journal entry might look like this:

Tuesday, October 7
9th Grade English

Began the introductory lesson on Shakespeare and the Globe Theater today. The biographical info went over only minimally well. Brian and Mark loudly wanted to know why they needed to know when he was born and died and what difference it made. Some of the other kids looked bored as I went into my spiel, and I realized I was probably lecturing too much.

Next time I should review my information that I present, and figure out what's important for them to know and what's extraneous. Just because I'm fascinated with it doesn't mean that it's all appropriate or necessary for a ninth-grader's introduction to Shakespeare. Also, maybe some sort of question-answer sheet about Shakespeare would work better and get more involvement from the kids.

On the bright side, they all seemed to love the Globe Theater model. They really liked the way it opened, showing the cross-section with all the various stage areas. Brian and Mark were among the most interested in the model. The kids also seemed to be able to follow along on their photocopied drawing of the Globe. Jon and Elizabeth (who usually aren't impressed with anything) told me that it was "pretty cool." The next time, maybe I'll start with the theater and allow more time for them to explore it.

Besides offering professional advantages, the teaching journal can be a valuable personal record. One twenty-year teaching veteran in Massachusetts has kept a journal about his teaching experiences throughout his career. He finds that it has "captured the moment," recording what he was thinking and experiencing as he taught throughout the years.

An alternative form of this idea is to develop a card file of "teaching tips," either with index cards or in a similar computerized format. This file of tips can provide quick, easy reference for planning or problem solving.

The Proper Frame of Mind

cultivating humility

It is important to have the right frame of mind during your first year of teaching: that of someone who is untested and who has a great deal to learn. Humility is a virtue that has been all but drowned out in our modern, "We're Number One" culture. Zen masters and teachers of the spiritual life urge the beginner to assume an attitude of submissiveness before what is to be learned. Not weakness, but humility. Many new teachers strive hard to *avoid* humiliation, not realizing that a humble person cannot be humiliated. Instead of assuming a false confidence, one can acknowledge that there is much to learn and open oneself up to that learning.

Making use of this suggestion is somewhat tricky. The humble frame of mind we are urging is one of alertness and quiet observation of your new context, expecting difficulties of some sort but being quietly confident that solutions will

Teacher Induction Programs

What's the Policy?

Recently the issue of special help for new teachers is becoming an important question for many local school districts and state legislatures. Every job has a break-in period, a time when the beginner learns the ropes and makes the connections between theory and practice. Adjustment and adaptation are the watchwords of life in the new workplace. Teaching is no exception. School districts and state legislatures are looking for ways to provide help for new teachers in a programmatic way, rather than individual experienced teachers lending a hand to newcomers.

How Does It Affect Teachers?

Most of the new programs and those on the legislative drawing board include mentoring assistance and targeted in-service help designed to augment formal teacher preparation, helping beginners to make the link between what they learned on the campus and the very concrete world of their new classrooms. Experienced teachers are affected as well, because they are often cast in the role of mentor.

What Are the Pros?

Programs that offer special help for new teachers represent a major opportunity for the teaching profession to ensure that beginners are not swamped and discouraged, but rather are given the opportunity to make a smooth transition into their chosen occupation.

For years the plight of the new teacher has commanded attention in the educational press and journals. Experts estimate that 30 percent of all new teachers leave the field within their first five years, and that many of these are one- or two-year teachers. Systematic help for new teachers could help reduce the loss of early-career teachers. In addition, students will benefit if their teachers get the help they need to do an effective job on their first assignments.

What Are the Cons?

Among the issues surrounding special help for new teachers are three, in particular: first and foremost, that old favorite, money; second, who gets the special help; and third, who gives the special help.

- *Money.* The costs of new teacher assistance programs are typically between two to five thousand dollars a year per teacher. And, while that may seem like a fine investment, there are arguments on the other side. First is the competing-options argument. A district that adopts a new teacher training program may be choosing to forgo a new swimming pool or banks of computers in every classroom. Or, the state legislators may want to use those same funds for special education or a new statewide testing initiative. Second, there are those who worry about "wasting funds" on people who are "just passing through." They cite the 30 percent new teacher turnover statistics, arguing that it is more prudent to spend precious staff development monies on those who represent a long-term investment.

- *Who gets the help?* Most of the teacher assistance programs now being considered were conceived when teaching positions were scarce. They were designed to help graduates from teacher-preparation programs make the transition from the college classroom to leading their own classrooms. Now new teachers are a scarce commodity and school districts are forced to hire people with little or no teacher preparation. The in-service programs are becoming "on-site and in-flight" substitutes for unprepared teachers. For example, a Greater Los Angeles school district, Montebello Unified schools, recently came to the realization that of the 160 new teachers in its new professionals support program, only 19 had regular state credentials.

Policy Matters! *(cont'd)*

Who does the helping? This issue can become a political football. Ideally, the best person to help a new teacher is a master teacher, experienced at the same grade level or in the same subject area, and who has talent as a teacher of teachers. In the actual world of schools, however, it does not always work out that way. Being designated a mentor teacher or having special responsibilities to help neophytes is both a professional honor and a professional plum. And plums are not always distributed on merit or worth. Among the alternative fruit distribution methods are:

- having those in power (superintendents, principals, supervisors, or school board members) decide;
- having the local teachers union decide and thus be tempted to hand out assignments to the most loyal members or those with the most seniority;
- having a faculty member in a particular school building decide, which runs the possibility of turning it into a popularity contest; and, finally,
- having the new teachers themselves select, which, among other problems, could again fall into the popularity trap.

While everyone seemingly wants to see new teachers succeed, the issue is hardly an educational policy slam-dunk.

What Do You Think?

1. In the arena of competing educational dollars, how high a priority would you put on support for new teachers?
2. Do you believe that these new teacher support programs should focus on the most needy, even if they become end-runs around regular teacher education programs?
3. Specifically, where do you believe that you, as a beginning teacher, will need the most help?

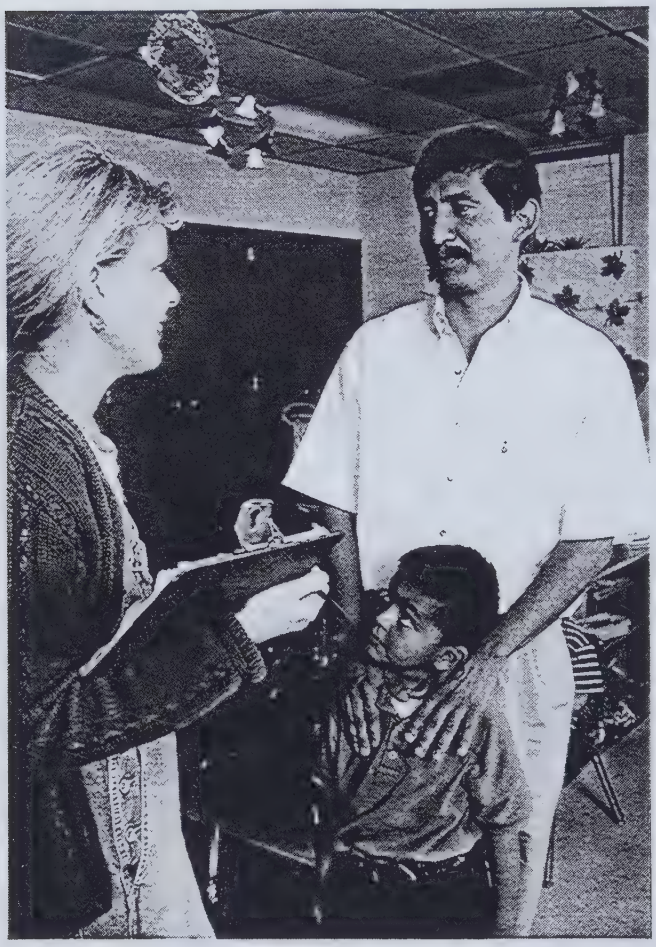
Source: Jeff Archer, *Education Week,* March 17, 1999, pp. 1, 221–222.

come. In a way, the new teacher should be like a good apprentice: working hard, eyes open, asking questions, and being eager to learn everything possible about the craft.

Find a Mentor

values of mentor

A first-year teacher can have no greater gift than a good **mentor,** an experienced teacher who is willing to act as a guide and confidant through the first year. Besides all of the information and tips that a mentor can give you, a good mentor is an interpreter-guide on what is essentially foreign turf. A mentor can tell you which pieces of paper from the principal's office need to be responded to immediately, who has the formal power and who has the real power, what the administrators emphasize most in teacher evaluations, and which teachers are most willing to share ideas and which ones are not. Perhaps even more important, a mentor is a friend. Seventy percent of teachers who have been mentored claim that the experience significantly improved their teaching. On the other hand, only one in five teachers reports having received such guidance.[6] However, in recent years many school districts have developed special arrangements to help beginning teachers. Some have special induction programs, some have mentor programs, and some have both. In situations where there is no induction program or a mentor is not assigned, we urge you to find a mentor on your own.



Home-school communication at its best! (© Michael Newman/ PhotoEdit)

Make Your Students' Parents Your Allies

We suggest that all teachers, but particularly new teachers, take a very proactive, positive approach to parents. Instead of having them get to know you indirectly through the often distorting eyes and mouths of their children ("My new teacher, Miss Sniddly, hates me. And besides, she can't teach. How come I got stuck with a new teacher?"), help them to get to know you and what you will be doing with their children this school year.

establish communication with parents

One way to do this is to prepare a short statement to be carried home and signed, introducing yourself to parents and outlining your major goals for the year. Stress that you and they are in a partnership to help their child have a productive year. Further, let them know how to get in touch with you and that you are looking forward to meeting them. One new first-grade teacher we heard about sent a letter with a snapshot of herself to her first-graders and their parents once she received her class list in the summer. She wrote a little about herself, told them some of the things they would do during the coming school year, and (for the parents) explained her approach to teaching. Besides being exciting

for the students, this technique helped the new teacher start the year (and, more important, finish the year) with her students' parents as strong allies.

A second suggestion is that once you have established disciplinary and homework policies, a copy should be sent home for parental sign-off.

Third, on the first day, get the home and office telephone numbers of each student's parent or parents. The fact that you possess these valuable bits of information will not go unnoticed by your students.

Fourth, it is a good idea to call all parents early in the fall. In particular, call the parent(s) as soon as a student appears to be falling behind, tuning out, or misbehaving: "Mrs. Tate, this is Philip's teacher. Philip's performance has begun to slip. What can we do to get him back on track?" "Mr. Fisher, this is Kathleen's teacher. Kathleen just won't stop talking in class. It is interfering with other students and keeping her from doing the work she is capable of. What can we do to make this the good year we all want for Kathleen?" The key word in dealing with parents is *we,* as in "What can *we* do?" Phone calls should be made and brief notes sent home for positive reasons as well. Such a "good news" call can make a parent's month!

Finally, if problems persist, insist on a parent visit. There is no surer way to get children's attention than to have them realize they are the reason their parents had to leave work early to come to school. And although this is an upsetting bother for many parents, it is usually worth it because of the positive effect it can have on their child's school experience.

Take Evaluation Seriously

The news that they are to be evaluated by their principal or some other administrator is often a surprise to novice teachers. Even more shocking is the revelation that the related evaluation reports are sometimes the cause of not being rehired.

Typically, it is a major job responsibility of principals and other district administrative personnel to visit systematically and evaluate the performance of new teachers. Depending on the district and the conscientiousness of the administrator, this can take place anywhere from once to a dozen times during the first year. Usually, though, there are three or four evaluative visits, followed up closely by feedback conferences during which the administrator goes over his or her observations. Together these evaluative visits play an important part in the school district's decision to rehire the teacher or terminate his or her employment.

preparing for and responding to feedback

It is important, then, for new teachers to understand thoroughly how their work will be evaluated. Before you accept a teaching position, be clear about how and when your work will be evaluated. Most school districts have an official evaluation and feedback form, and you should know this well. If the evaluator gives you advance notification of a visit, prepare for the occasion. Find out from your mentor teacher what the administrator really stresses in teaching. And do your best. If the evaluator raises issues or makes suggestions for improvement, take them seriously. You do not necessarily have to agree, but you should not casually ignore the issues. In most cases the comments are legitimate, and the new teacher should strive to repair or strengthen the area that was criticized.

Take Care of Yourself

physical health

One of the greatest surprises of full-time, fully responsible teaching, as opposed to student teaching, is how tiring it is. Teaching is physically, mentally, and emotionally draining, particularly until one gets conditioned to it—that is, until one gets into "teaching shape." This is true for many jobs. The stress and strain of new employment wear newcomers down and set them up for colds, flu, and other mild ailments. The problem is compounded in teaching because it is such an "in your face" occupation (referring to all those coughing, sniffling, and wheezing faces you encounter every day). A classroom is a magnificent germ factory, with viruses claiming new victims regularly. The teacher who is exhausted, run-down, and staying up late reworking lesson plans and correcting papers is a prime target for whatever is circulating in the environment.

mental health

The stress and strain of a new teaching position also can cause mild depression. In their first year, few teachers are what they had hoped to be. Often new teachers

Kevin and Jim's Seven Additional Rules for Surviving the First Year of Teaching (or Seven Compelling Reasons Why Future Teachers Should Not Try to Resell This Book to the Evil Used-Book Buyers)*

1. *When in doubt, think.* Instead of simply fretting about problems or panicking, use your best tool: your mind. Problem-solve. Try to identify the problem, possible solutions, and what seems best, and then act and judge whether or not that option helped the situation.
2. *Don't look for love in the classroom.* Maybe respect, but not love. Don't even expect to be appreciated—that may not come from your students for ten or twenty years.
3. *Deal with your authority problems before entering the classroom.* Come to terms with the fact that you will be responsible for maintaining an orderly and civil environment, and think about how you will accomplish this feat.
4. *If you are not organized, get organized.* Coping with the planbooks, student papers, office memos, attendance records, grades and report cards, and on and on requires much more organization than many beginners have practiced.
5. *Love thy school secretary and custodians.* Many beginners fail to realize how important the school secretary and custodians are in enabling teachers to do an effective job and how important they are in the "informal communication network" of the school.
6. *Focus on learning.* Many beginners fail to concentrate on making sure their students really learn something and thus have feelings of accomplishment. Students will put up with a great deal of "beginning teacheritis" if they sense they are learning.
7. *Don't—we repeat, don't—get married two weeks before the start of your first teaching job.* For reasons unknown to the authors, each year thousands of new college graduates decide to jump at the same time into two of life's most difficult undertakings: beginning a career and starting what they hope will be a lifelong relationship.

*The authors promise that if you follow these seven rules faithfully, you will survive the first year of teaching. You may even like it! On the other hand, if you do not survive the year, return the unused portion of the book to your instructor for a refund.

are away from their regular support system of family and friends. Having not yet established realistic standards, they really don't know if they are succeeding or failing. A bad class or even one resistant or disrespectful student can emotionally unseat them.

To counter this vulnerability to sickness of body and spirit, new teachers need to give special attention to their health. Instead of getting overtired and run-down, beginners need to take special pains to get enough rest, eat well, and get adequate exercise.

A Final Word

Much of this chapter has dealt with the trials of being a new teacher. Nevertheless, most new teachers have a great sense of accomplishment and are proud of themselves at the end of their first year. They have learned an enormous amount in nine or ten months. Along with the trials, teaching has its pleasures and bright moments, making it a rewarding and fulfilling occupation for most. English novelist Joyce Cary has written that human joy comes not from the great events but from the little, everyday things, like a good cup of tea. The joys and satisfactions of teaching can lie in mundane happenings and small surprises. As a teacher, you may find joy in the following:

- Experiencing those electric moments when you can *feel* the children thinking and *see* them making new connections
- Watching two lonely kids whom you brought together walk down the hall side by side, now friends
- Getting your planbook back from the supervisor with the comment "These are *excellent* lessons"
- Finding in your box, on a rainy Friday afternoon, a note written in a childish scrawl: "You are my most favorite teacher. Guess who?"
- Shopping downtown and meeting one of your students, who proudly introduces you to her mother as "my teacher," and being able to tell by the mother's response that you are respected in their household
- Having a former student call to tell you that he has a problem and needs your advice
- Chaperoning a dance and having what you thought was your most hostile student smilingly introduce his girlfriend to you
- Hearing in the teachers' lunchroom that your supervisor called you "a real professional"
- Being observed by the principal and having your students make you look terrific

- Surviving until June, being bone-tired but proud of what you and your kids have been able to do
- Cleaning out your desk on the last day of school after the kids have been dismissed and finding a box of candy with a card signed by the whole class
- Realizing—be it daily, weekly, or monthly—that what you are doing with your life *really does make a difference*

KEY TERMS

culture shock
social distance
teaching journal
mentor

FOR REFLECTION

1. Think of a time when you experienced culture shock, and try to remember, in as much detail as possible, how it made you feel.
2. Can you remember any beginning teachers you have had who fit the scenarios described in this chapter or got into similar situations?
3. How do you explain the different attitudes toward students of teachers in training and first-year teachers?
4. Where do you stand on the issues of discipline and social distance? Do you believe the school should be concerned with discipline? What is your concept of an effective degree and method of discipline? How much social distance do you believe is appropriate for you?
5. If you were to begin teaching tomorrow and were free to evaluate your students in any way you chose (or not to evaluate at all), what would you do?
6. What do you expect to be the major problems you will encounter as a beginning teacher?
7. What can you do now to begin solving those problems?

FOR FURTHER INFORMATION

Codell, Esme Raji. *Educating Esme: Diary of a Teacher's First Year.* Chapel Hill, NC: Algonquin Books, 1999.

This book is the account of a new fifth-grade teacher in a Chicago inner-city school. Hip, imaginative, and irreverent, the book takes the reader through the teacher's triumphs and travails with students and a particularly dense administrator.

Dollase, Richard. ***Voices of Beginning Teachers: Visions and Realities.*** **New York: Teachers College Press, 1992.**
Using the stories of four beginning teachers, the author weaves their voices and insights into an examination of many key themes confronting new professionals.

Kellough, Richard D. ***Surviving the First Year of Teaching: Guidelines for Success.*** **Columbus, OH: Merrill/Prentice Hall, 1999.**
Designed specifically as a survival guide for beginners, this manual is filled with practical tips from first lessons to conducting conferences with parents.

Pitsco's Launch to Lesson Plans. **World Wide Web site at http://www.pitsco.com**
SEARCH
This web site offers a wealth of information for new teachers, particularly for lesson plans and teaching ideas.

"Supporting New Teachers," ***Educational Leadership*** **[special issue], 56, no. 8, May 1999.**
This special issue has several articles focusing on the plight of first-year teachers and how schools can help them get over their initial difficulties.

What to Expect Your First Year of Teaching. **World Wide Web site at http://www.ed.gov/pubs/FirstYear/index.html**
SEARCH
This web site is an excellent resource for beginning teachers. It combines many of the practical tips and much of the advice in this chapter with several resources helpful to beginning teachers.

Wong, Harry K., and Rosemary T. Wong, ***The First Days of School: How to Be an Effective Teacher.*** **Sunview, CA: Harry Wong Publishing, 1998.**
This handbook abounds with tips and strategies to help the new teacher get a strong start through motivation and minimizing discipline and the other problems that plague new teachers.

3 Who Are Today's Students in a Diverse Society?

CHAPTER PREVIEW

In some ways, children never change. The pictures of children in our classic literature are as true today as when they were first written. Look at the conniving, mischievous Tom Sawyer, or the overly curious Alice in Wonderland, or the tenacious Mafatu in *Call It Courage.* These characters are endearing to us in part because we have all known children like them. And yet we are also products of our present society. The world around us shapes our daily experiences and influences our understanding of ourselves. As our society changes, so does the context, the social milieu, in which our children are raised and brought up to understand and form expectations of the world. Children have been called barometers of change. More than any other segment of society, children are affected and shaped by emerging social conditions.

This chapter emphasizes that

- Studies of the demographic makeup of the country indicate shifts in ethnic composition.
- All children have basic needs. Being aware of and understanding these commonalities helps us understand the diverse needs of students.
- Students have many strengths and abilities that extend beyond the traditional emphasis in our schools on linguistic and analytic abilities. Approaches that recognize multiple views of intelligence and differing learning styles emphasize the great diversity in student learning and ability.
- Schools address the individual needs of students through multicultural, bilingual, special education, and gifted and talented programs.

- Cooperation between the school and various support agencies, such as community health, child care, and social services, is increasing.
- To cope in today's classroom, teachers must be aware of many dimensions of student diversity.

The children of today are very much like the children of yesterday or the children of tomorrow. Certain stages of cognitive, social, emotional, and physical development have been identified, and a similar progression through these stages occurs for everyone. We all have basic psychological and physical needs that cut across racial, cultural, age, and gender boundaries. Understanding these stages of development and areas of common needs gives the classroom teacher insight into student behavior and so helps the teacher develop appropriate classroom experiences. You learn a great deal about these subjects in your courses in child development and educational psychology.

However, it is also important to be sensitive to the great differences among students and to factors in our society that are directly affecting their lives. In this chapter, we hope to make you more fully aware of the diversity in our society and our classrooms, the range of abilities among your students, and the schools' attempts to address all this diversity. We also hope to make you more deeply sensitive to the sorts of issues, potential problems, and benefits related to this diversity.

Student Diversity

Children in schools are a mirror of society. In public institutions, therefore, many types of diversity will be represented in varying degrees. You will see this diversity in your students along a number of dimensions, including who the students are, what they need, and their various kinds of abilities.

Racial, Ethnic, and Cultural Backgrounds

racial and ethnic diversity

Students in your classroom are likely to come from a variety of racial and ethnic backgrounds, representing many different cultures and ways of looking at the world. With the development of a richer, more varied society, differences in values and family expectations are more and more evident. For example, some families may place a premium on school and higher education, whereas other families may emphasize early entry into the workplace. But even though you will encounter a range of familial expectations for school achievement, all children deserve the best educational experience they can get while in school. Recognition of racial and ethnic differences can provide the understanding and insight needed for more effective instruction.

Diversity in the classroom means that your students will come from a wide range of cultural backgrounds, may speak a first language other than English, and may have a variety of learning abilities and learning styles. (© David Young-Wolff/ PhotoEdit)

Languages Other Than English

non-English-speaking students

Some of your students may speak a primary language other than English. More than 3.4 million **limited English proficient (LEP)** students are enrolled in public or nonpublic elementary and secondary schools—about 7 percent of the total enrollment—and the number has increased every year for the last decade.[1] Seventy percent of all LEP students are concentrated in the states of California (42 percent), Texas (15 percent), New York (7.8 percent), and Florida (5 percent).[2] About one in seven of the nation's five- to seventeen-year-olds speaks a home language other than English, and the percentage of such young people is growing two and one-half times faster than the general school population.[3] More than 2 million immigrant youths enrolled in U.S. schools in the past decade, many of them non–English speakers. As these children and youth enter schools, most will need to make sense of a new language, a new culture, and possibly a new way of behaving. An important function of teachers and schools is to offer a source of stability for students who are experiencing rapid change in their lives. Some school systems have used teacher aides who speak the child's language to help connect the child and the school. The use of bilingual peer tutors may also help provide a greater sense of stability.

Socioeconomic Status

Students come from families with varied economic, educational, and occupational backgrounds. **Socioeconomic status (SES)** is the term used by the U.S. Bureau of the Census to measure economic conditions of people using the family's occupational status, income, and educational attainment as measures of status. Individuals high in income, occupational prestige, and amount of education are considered to be high in socioeconomic status, and are usually seen by

others to be upper-class people who are influential in their communities. In contrast, people low in socioeconomic status are seen as being lower-class people who have little prestige or power. The benefits of being a child from a high-SES family show up in school performance, as such a child typically does much better academically than a student from a low-SES family. Teachers and schools are challenged to help overcome the debilitating effects of low SES on students from these families. This topic is discussed in more detail in Chapter 5.

SES related to school performance

Gender

Boys and girls are different even when they come from the same socioeconomic, racial, or ethnic group. They are raised differently, and often society has different expectations of them. Treating boys and girls equitably as individuals and not as gender stereotypes is a constant challenge for both male and female teachers. We will discuss this topic in more detail when we look at gender issues in Chapter 5.

avoiding gender stereotypes a challenge

Sexual Orientation

You are likely to have gay and lesbian students in your classroom, especially if you teach at the middle or high school level, and you are apt to encounter gay and lesbian parents of students at any level. Schools typically have not been welcoming environments for young homosexuals. Gay and lesbian students have often experienced taunting, harassment, and even violence because of their sexual orientation. As a teacher, you will be challenged to establish and maintain a safe and supportive classroom environment for these and all of your students. See Chapter 5 for a more detailed discussion of this topic.

schools often hostile toward gay/lesbian students

Diverse Needs

Psychologists and educators have identified a number of basic needs that all individuals experience, including needs for belonging, safety, and self-esteem. However, students in your classroom will develop at different rates and probably will display *diverse needs*. Students will also bring their own individual histories, backgrounds, and conditions that have influenced how and whether certain needs have been satisfied. For example, a child from a stable, secure home may have different needs than a child who has not had this kind of security. Recognizing diverse needs will help you to better understand some student behaviors and perhaps increase your insight into how to respond.

students with differing needs

Diverse Abilities

Another dimension of diversity will be seen in the academic *abilities, achievements, and learning styles* of your students. Some students will enter the school environment and immediately do well. Other students will appear not to respond to your teaching. One of your biggest challenges as a teacher will be to provide a variety of experiences and learning encounters to accommodate your students' diverse learning styles and abilities.

academic diversity

As we delve further into the topic of today's students in a diverse society, you will discover that you need to be aware of these sources of diversity to address the educational needs of your students. Let's examine each of these sources in more detail and consider how they will influence your ability to teach effectively.

Racial, Ethnic, and Cultural Diversity

Though American society has always been composed of various races, ethnicities, and cultures, today we are experiencing great cultural diversity. At one time, the United States was considered a "melting pot" of many different kinds of people. Immigrants were expected to give up the language and customs of their homelands and adopt the language and customs of their new country. During the nineteenth and early twentieth centuries, schools contributed to the concept of the melting pot by socializing and acculturating immigrant children to American ways while discouraging them from maintaining the ways of their homelands. Many states even passed laws forbidding instruction in any language but English. The basic idea was to produce a society with one dominant culture. This process of incorporating an immigrant group into the mainstream culture is often referred to as *enculturation* or **assimilation.** Many European immigrant groups were easily assimilated into the dominant American culture, but people of color were often prevented from doing so.

"melting pot"

The concept of the melting pot has generally been replaced by the notion of **cultural pluralism,** which calls for an understanding and appreciation of the cultural differences and languages among the nation's citizens. The goal is to create a sense of society's wholeness based on the unique strengths of each of its parts. Cultural pluralism rejects both assimilation and separatism. Instead, it seeks a healthy interaction among the diverse groups in our society; that is, each subculture maintains its own individuality while contributing to our society as a whole. As some commentators put it, cultural pluralism argues for replacing the melting-pot metaphor with that of a "mosaic" or "tossed salad," in which the individual parts are still distinct but combine to make a unique whole.

cultural pluralism

Cultural pluralism is becoming an increasingly important concept in our society as the demographic composition of public school classrooms continues to change as we enter the twenty-first century. While about 28 percent of the total population are members of minority groups, 36 percent of school-age children are minority, a figure that will continue to increase in the coming years.[4] Birth rates among minority groups are higher than those of white Americans, and immigration patterns are contributing to the increasing size of the minority population.

demographic changes

A statistical breakdown by individual youth groups reveals some interesting trends and projections, as shown in Table 3.1. Compared to the 1995 population, nonwhite youth are expected to increase by 7.6 million by the year 2010, and white youth are expected to decline by 2.9 million. These national averages disguise the fact that minority groups are unequally distributed across the

TABLE 3.1 Projections of the U.S. Population Age 0–17, 1995–2010 (millions)

Youth	1995	2010	Change
Total youth*	69.1	73.6	+4.5
White, non-Hispanic	45.9	43.0	−2.9
Hispanic (of any race)	9.5	13.6	+4.1
Black†	10.3	11.7	+1.4
Other races†	3.3	5.4	+2.1
Increase in total nonwhite youth = +7.6 million			
Decrease in total white youth = −2.9 million			

*May not add exactly because of rounding.

†Includes small number of Hispanics; "other races" are primarily Asian and Native American.

Source: Youth Indicators 1996 (Washington, DC: U.S. Department of Education, National Center for Education Statistics, September 1996), p. 16.

country. The fastest-growing states also have high percentages of minority youth. For example, the four states of California, Texas, New York, and Florida will have more than one-third of the nation's young people by 2010, and the youth population of each of these states will be more than 52 percent minority. By that same year, about twelve states will have more than 50 percent minority youth populations.[5] In the forty-seven urban school districts that constitute the "great city schools," including those in New York City and Chicago, an overwhelming majority of students are from minority groups.

increasing minority school population

As might be expected with increasing cultural diversity, teachers will encounter more students whose native language is not English and whose ethnic and cultural backgrounds reflect a Hispanic or Asian heritage. Although you might think that these non-English-speaking youngsters are from recent immigrant families, a surprisingly large number of them were born and raised in the United States but have not learned English at home or in their community. Many of them also lack basic skills in the language spoken at home, which makes it more difficult to teach them English at school.

Not There Yet

Although many people have promulgated cultural pluralism as a desirable goal, it does not currently exist in the United States. Although racial, ethnic, and cultural diversity does exist, equality among the various groups does not. In general, racial and ethnic minorities do not share equal political, economic, and educational opportunities with those of the dominant culture, even though our society espouses such equality. Many minority groups have been excluded from full participation in American society.

cultural pluralism not a reality

Acting White

Two researchers, Signithia Fordham and John Ogbu, studied a predominantly African American high school in Washington, DC, to see how students' sense of collective identity enters into the process of schooling and affects academic achievement. They conclude that many African American students underachieve academically because they are afraid of being accused of "acting white."

Fordham and Ogbu argue that historically subordinate minorities like African Americans have developed a sense of collective identity, or sense of peoplehood, in opposition to the social identity of white Americans. Because African Americans have been excluded from true assimilation in economic, political, social, and psychological arenas, they develop an oppositional cultural frame of reference that includes protecting their identities and maintaining boundaries between themselves and white Americans. For African Americans to behave in a manner that falls within the white cultural frame of reference is to "act white" and is negatively sanctioned by the peer group.

The teenage peer group at "Capital High School" (99 percent African American student body) exerted strong pressure to reassure one another of black loyalty and identity by discouraging students from engaging in certain behaviors that were interpreted as "white." Being an academic high achiever was one such unacceptable behavior. Fordham and Ogbu found that many students succumbed to peer pressure and purposely underachieved academically. Many of these students were afraid of being labeled "brainiacs," a term meaning that a person was smart but also a jerk. Worse yet for male students was to be known as a "pervert brainiac." To be known as a brainiac was to question a male student's manhood, but to be known as a pervert brainiac left little doubt and was the kiss of death among peers.

Students who wanted to achieve academically and still be considered an accepted member of the peer group tried various strategies to avoid antagonizing their peers, including engaging in athletic activities, acquiring the protection of "tough guys" in return for assisting the latter in their schoolwork and homework, and clowning. These students were careful not to brag about their academic achievements or to bring attention to themselves. But even in these instances, the researchers conclude, the students would do much better if they did not have to divert their time and attention into strategies to conceal their academic pursuits.

What are the implications of these findings? Clearly, schools must find ways to reinforce black identity that are compatible with academic achievement. Similarly, the African American community must convince black children that academic pursuit is not synonymous with acculturation into white society. If the community can demonstrate that academic achievement is valued and appreciated, the children will get a different message.

Source: Signithia Fordham and John U. Ogbu, "Black Students' School Success: Coping with the Burden of 'Acting White,'" *The Urban Review* 18, no. 3 (1986), pp. 176–206.

Unfortunately, schools have too often been run for the benefit of those in the dominant cultural group, excluding minority groups from receiving the full range of benefits. Schools that embrace cultural pluralism seek to promote diversity and to avoid the dominance of a single culture. Their curricula are infused with the histories and contributions of diverse groups. These schools attempt to use the cultural patterns of the students to provide instruction and promote learning. The goal is for students to be comfortable operating both within their own cultures and in others as well. Students from all racial, ethnic, and cultural groups are urged to participate in the school's various social, athletic, and governmental activities. These schools seek to eradicate the aca-

demic achievement disparities among the various racial, ethnic, and cultural groups. In short, the goal for schools that aim for cultural pluralism is that no particular cultural group either dominates or is excluded from those activities and accomplishments that schools value.

Many people, however, resist the notion of cultural pluralism as a desirable goal. These people argue that cultural pluralism will undermine our country's common traditions, historically derived from western European cultures. We discuss these issues later in the chapter when we talk about multicultural education.

Diverse Needs

In addition to the diversity of racial, ethnic, and cultural backgrounds we have discussed so far, another element of diversity occurs within each individual. We all have basic physical and psychological needs that may vary in their prominence and expression because of individual circumstances. One way to understand the diverse needs of students is to see how one prominent psychiatrist and educator, William Glasser, has conceptualized the basic needs of all individuals.

Glasser's Choice Theory

Glasser begins with the premise that each of us is born with fundamental needs for survival, love and belonging, power, freedom, and fun.[6] Throughout our lives, our motivations, actions, and behaviors are attempts to satisfy these needs. This premise, called **choice theory,** holds that if we understand and identify these needs within ourselves, we can make conscious choices about how best to meet them. The recognition of our ability to make choices results in personal empowerment: we have control over how we choose to react to external events and information.

choice theory

Glasser believes that teachers should empower their students through the use of choice theory. He states that effective teachers combine the needs of students with classroom assignments or activities. By understanding and incorporating basic human needs into the classroom structure, the teacher is teaching in a way that also meets those needs. The more students are convinced that their schoolwork satisfies their needs, the harder they will try and the better work they will produce. For example, when asked what is the best part of school, many students respond, "My friends." According to Glasser, this expresses the students' built-in need for friendship, love, and belonging. Rather than structure classroom settings to suppress this need, such as by emphasizing independent seatwork or teacher lectures, teachers should find ways to let students associate with others in class as a planned part of learning. Glasser refers to this kind of cooperative grouping as the use of *learning teams.*

Teaching students in cooperative learning teams also meets students' needs for power. Using the term *power* synonymously with *self-esteem* or *sense of importance,* Glasser explains that to fulfill this need students must have the sense that

learning teams, power needs

someone whom they respect listens to them. Unfulfilled needs for power often result in a number of undesirable attention-getting behaviors. Glasser believes these inappropriate behaviors are often misguided efforts to achieve power and are the source of 95 percent of discipline problems in school. In accordance with choice theory, he suggests that teachers structure opportunities for students to fulfill needs for power appropriately during the school day, such as by providing a forum for students to be heard. In addition to learning teams, in which students interact and listen to one another in the learning process, Glasser suggests that teachers provide opportunities for student input and self-evaluation of homework, classwork, and tests. He believes that students need to be encouraged to set their own standards for quality work and to evaluate whether they are meeting those standards. This helps to satisfy the need for power and instills an internal standard for quality education and work.

Understand and be confident that each of us can make a difference by caring and acting in small as well as big ways.

—MARIAN WRIGHT EDELMAN

Glasser proposes that students' needs for freedom and fun, though important, are not at the core of problems in schools. Students generally understand the need for some structure in dealing with large groups of people and the resulting rules and regulations that must govern behavior in school. Though fun is an essential need, students who have a sense of belonging in school and a forum for personal power are already likely to be experiencing fun.

Glasser's theory of personal empowerment provides one interesting way of viewing and identifying a wide variety of student needs. Other approaches, such as Abraham Maslow's hierarchy of needs theory, may also be useful. The most important point is that teachers must be aware of their students' varying needs and respond accordingly in the classroom.

Schools help students meet social, as well as academic, needs. (© Bob Daemmrich)

Adolescent Subcultures

Teenagers often satisfy their needs for belonging, power, and fun by forming crowds, or groups that share common characteristics. Most schools have crowds of elites, average students, and outcasts, with various terms used to describe them: *jocks, preppies, brains, druggies, burnouts, nerds/geeks/dweebs,* and *goths.* Each crowd has attitudes, behaviors, or dress characteristics that distinguish it from all other crowds. As members of these adolescent subcultures, teenagers can express their own attitudes, explore personal relationships, and test themselves against others. Often teens don't even select a group as much as they are placed into one because of their image among their peers.

how crowds are labeled

Elite groups, such as the jocks and preppies, are the "leading crowd," who enthusiastically participate in, and receive the endorsement of, the school. The outcasts, such as the burnouts or the goths, tend to have an adversarial rather than cooperative relationship with the high school because they believe school doesn't serve their needs well. The outcasts are contemptuous of the elites' interest in student government and athletics, while the elites reject the outcasts' resistance to authority and achievement. Clothing and adornment are probably the most powerful symbolic indicator of category membership, although each crowd also tends to stake out particular territories of the school as its own.

symbols of membership

Membership in teenage subcultures begins to form in the middle and junior high schools as cliques develop around particular interests such as athletics, academics, student government, drugs, and tastes in music and cars. These groups strengthen as the teenagers begin to move away from their families, and peer membership becomes a type of new family where youngsters find comfort and support. By senior year, however, the hold of the subcultures on students has weakened. The students develop more self-confidence, and they seek greater freedom. At this point, the friendship group becomes a drag on their autonomy. Until that happens, however, the teen subcultures exert a strong influence on the values of their members.

Most high schools have done a reasonably good job of making academically and socially oriented students an integral part of school life. They have been less successful with subcultures like the various outcast groups. In fact, because groups like the burnouts or goths reject the schools' values, the schools may be reinforcing their alienation. Finding ways to bring members of alienated subcultures into participation in their schools, bring the loners or outsiders into greater contact with their peers, and channel peer influence as a positive force is a major challenge for high school and middle school educators.

Diverse Abilities

In some ways, many of our schools today are not structured to address students' diverse abilities. Most of our schools tend to emphasize a curriculum that specifically targets the predominantly linguistic and analytic abilities needed to do well on commonly used standardized tests. This constricted focus on a limited

traditional focus on small range of abilities

range of abilities results in an education system that teaches and reinforces only certain types of achievement. Children who are strong in linguistic and analytic tasks are likely to be successful in school and feel a great sense of achievement. Other children, however, who may be very competent or even gifted in non-traditional school tasks may experience frustration or failure in school. Children do not enter school as failures; rather, they acquire this debilitating label from a system that is strongly oriented toward a limited range of student abilities.

As a teacher, it is important to be aware of and help nurture a broad spectrum of abilities and strengths in your students. In the following section, we look at the theory that students may have many abilities and talents not tapped by traditional schooling. We also explore learning styles to see how different students learn and perhaps broaden your views on approaches to teaching. Then we briefly examine characteristics of students along a range of disabilities and talents.

Multiple Intelligences

Howard Gardner, a leading psychologist, proposes that we should move toward educating **multiple intelligences,** of which linguistic and analytic abilities are only two facets. In Gardner's books, *Frames of Mind* and *Multiple Intelligences: The Theory in Practice,*[7] he explains that we all have strengths, weaknesses, and unique combinations of cognitive abilities. Gardner proposes that people have at least eight distinct intellectual capacities that they use to approach problems and create products:

eight different abilities

1. *Verbal/linguistic* intelligence draws on the individual's language skills, oral and written, to express what's on the person's mind and to understand other people.
2. *Logical-mathematical* intelligence understands principles of some kind of causal system, such as the way a scientist does, or can manipulate numbers, quantities, and operations, the way a mathematician does.
3. *Spatial* intelligence refers to the ability to represent the spatial world internally in the mind, the way a chess player or sculptor does.
4. *Bodily-kinesthetic* intelligence is the capacity to use your whole body or parts of your body to solve a problem, make something, or put on some kind of production, such as an athlete or a performing artist does.
5. *Musical* intelligence is the capacity to "think" in music, to be able to hear patterns, recognize them, remember them, and manipulate them.
6. *Interpersonal* intelligence is the ability to understand other people, an ability that we all need but is particularly important for teachers, salespeople, and politicians.
7. *Intrapersonal* intelligence refers to having an understanding of yourself, of knowing your preferences, capabilities, and deficiencies.

8. *Naturalist* intelligence refers to the ability to discriminate among living things (plants and animals) as well as sensitivity to features of the natural world, such as rock formations and clouds.[8]

Traditionally, schools have tended to reinforce a learning profile emphasizing verbal/linguistic and logical-mathematical abilities and de-emphasizing or excluding other possible intelligences.

Teaching Implications In Gardner's theory, abilities in diverse areas would be valued as indicators of intelligence and be considered worthy of further nurturance and development in school. To address these varied intelligences, Gardner emphasizes learning in context, particularly through apprenticeships. Student development in an area like music should be fostered through hands-on practice and experiences. Even traditional subjects should be taught in a variety of ways to address the varied intelligences of both students and teachers. For example, the history of an era might be taught through a number of media and methods, ranging from art and architecture to biographies and dramatic reenactments of events. Assessments should also be tailored to different abilities and should take place in the learning context as much as possible.

fostering diverse abilities

The theory of multiple intelligences emphasizes the highly individualized ways in which people learn and recognizes that each of us has unique intellectual potential. Acknowledging and fostering individual abilities in a variety of areas is one way teachers can help students. This is an emerging idea in education. The Multiple Intelligences Menus, shown in Table 3.2, offer some ideas for expanding instructional repertoires and infusing variety into lessons. Currently a number of schools across the country are applying the theory in the classroom on a day-to-day basis. The multiple intelligences theory provides a framework for enhancing instruction and a language to describe the efforts. It provides teachers with a complex mental model from which to construct curriculum and improve student learning. These efforts should contribute to our knowledge and skills in this area.

Differing Learning Styles

Another approach to individual abilities and differences is the theory of learning styles. A **learning styles** approach to teaching and learning is based on the idea that all students have strengths and abilities, but each student may have a preferred way of using these abilities. Learning style models focus on the process of learning, that is, how individuals absorb and think about information. Some researchers have identified four basic learning styles[9]:

varieties of learning styles

1. The Mastery style learner absorbs information concretely; processes information sequentially, in a step-by-step manner; and judges the value of learning in terms of its clarity and practicality.
2. The Understanding style learner focuses more on ideas and abstractions; learns through a process of questioning, reasoning, and testing; and evaluates learning by standards of logic and the use of evidence.

TABLE 3.2 Multiple Intelligences Menu

Linguistic Menu	Musical Menu
Using storytelling to explain _____	Give a presentation with appropriate musical accompaniment on _____
Conduct a debate on _____	Sing a rap or song that explains _____
Write a poem, myth, legend, short play, or news article about _____	Indicate the rhythmical patterns in _____
Create a talk show radio program about _____	Explain how the music of a song is similar to _____
Conduct an interview of _____ on _____	Make an instrument and use it to demonstrate _____
Logical-Mathematical Menu	**Interpersonal Menu**
Translate a _____ into a mathematical formula	Conduct a meeting to address _____
Design and conduct an experiment on _____	Intentionally use _____ social skills to learn about _____
Make up syllogisms to demonstrate _____	Participate in a service project to _____
Make up analogies to explain _____	Teach someone about _____
Describe the patterns of symmetry in _____	Practice giving and receiving feedback on _____
Others of your choice _____	Use technology to _____
Bodily-Kinesthetic Menu	**Intrapersonal Menu**
Create a movement or sequence of movements to explain _____	Describe qualities you possess that will help you to successfully complete _____
Make task or puzzle cards for _____	Set and pursue a goal to _____
Build or construct a _____	Describe one of your personal values about _____
Plan and attend a field trip that will _____	Write a journal entry on _____
Bring hands-on materials to demonstrate _____	Assess your own work in _____

3. The Self-Expressive style learner looks for images implied in learning; uses feelings and emotions to construct new ideas and products; and judges the learning process according to its originality, aesthetics, and capacity to surprise or delight.
4. The Interpersonal style learner, like the Mastery learner, focuses on concrete, palpable information; prefers to learn socially; and judges learning in terms of its potential use in helping others.

TABLE 3.2 Multiple Intelligences Menu *(cont'd)*

Visual Menu	Naturalist Menu
Chart, map, cluster, or graph _____	Create observation notebooks of _____
Create a slide show, videotape, or photo album of _____	Describe changes in local or global environment _____
Create a piece of art that demonstrates _____	Care for pets, wildlife, gardens, or parks _____
Invent a board or card game to demonstrate _____	Use binoculars, telescopes, microscopes, or magnifiers to _____
Illustrate, draw, paint, sketch, or sculpt _____	Draw or photograph natural objects _____

Source: Reprinted with permission from Linda Campbell, "How Teachers Interpret MI Theory," *Educational Leadership, 44* (September 1997), p. 18.

It's important to understand that various styles are neither good nor bad, just different. It's also important to know that individuals are not locked into any one style but can vary styles to fit different situations and tasks. Whereas Gardner's theory of multiple intelligences centers on the *content* and *products* of learning and has its roots in an effort to rethink the theory of measurable intelligence, learning styles theory addresses differences in the *process* of learning and the different ways people think and feel as they solve problems, create products, and interact.

Though key advocates and researchers of a learning styles approach to education agree that individual strengths and abilities should be emphasized, they disagree on how to put the theory into practice. Some educators call for a formal assessment of each student's learning style and then a prescription for appropriate teaching methods for that individual. Others believe that students should be assessed and matched with teachers having similar learning styles. Still others warn that current tests are not yet technically adequate and that using these tests may actually harm students because they may result in improper labeling of individuals and their so-called learning styles.

disagreements over implementation

Teaching Implications A learning styles approach to teaching is currently receiving a great deal of attention in education. Though few schools adhere strictly to any one "model," the approach is being applied in varying forms and intensities in many schools. Rather than label students as having a particular learning style, many educators argue that curriculum and instruction should offer varied lessons that appeal to a range of strengths, abilities, and learning preferences over time. Teachers need to accommodate different learning styles by systematically varying teaching and assessment methods to reach all students. Flexibility and variety are the keys: don't assume that all students learn the way you do, and don't undervalue students just because their learning styles differ from yours. Technology can help in varying instruction and assessment methods.

keys for teachers

As teachers become more familiar with new technology, they are making use of CD-ROMs, video/audio World Wide Web sites, and other multimedia tools that offer students varied ways to access materials and learning experiences.

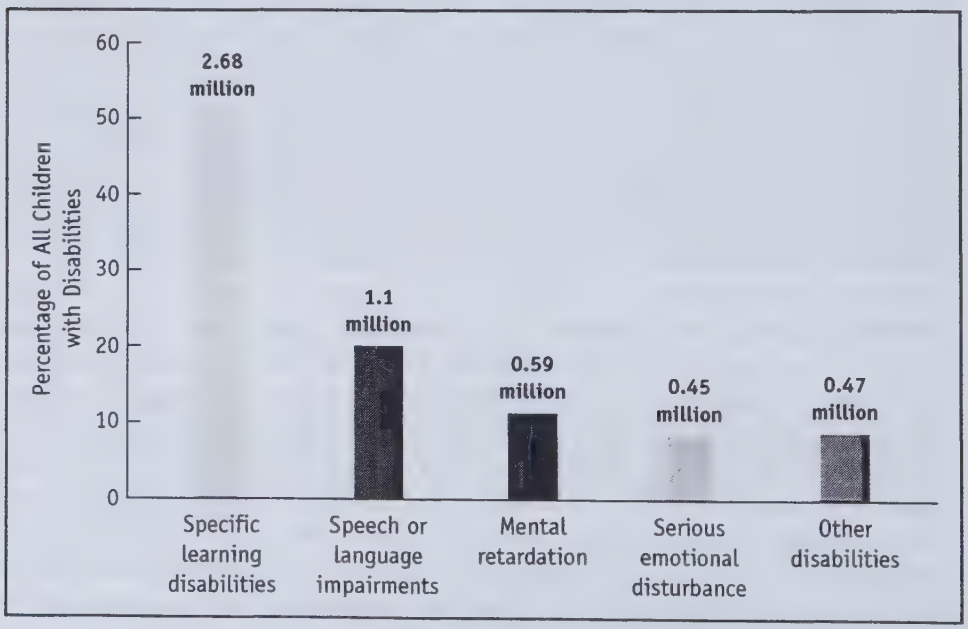
Students with Disabilities

types of disabilities

Within the range of diversity your students will display, some will have disabilities. The types of disabilities you may encounter are many. For example, you may have students with mental retardation, emotional disturbance, learning disabilities, attention deficit disorders, speech or language impairments, multiple handicaps, autism, traumatic brain injuries, orthopedic impairments, visual impairments or blindness, and hardness of hearing and deafness. Figure 3.1 shows the percentage and number of students in each of these categories. During the 1996–97 school year, 5.2 million students, ages six to twenty-one, received federal aid for their disabilities; these students represented 11 percent of the total public school population. About 560,000 additional children, ages three to five, also received federal aid for their disabilities. In 1997, the federal government distributed approximately $3.1 billion to the states for students with disabilities.[10]

Teaching Implications Students with disabilities will likely be in your classroom for varying amounts of the school day depending on the types and amount of support services they are receiving. How will you deal with the different needs of these children? Most important, remember not to stereotype them. Certainly

FIGURE 3.1 Specific Disabilities Among Children Age 6–21: Total and Percentage for Each Category



Source: Twentieth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (Washington, DC: U.S. Department of Education, 1998), p. II-16.

different disabilities will have different implications for student learning. For example, a student with mental retardation may require repetition and practice to master simple concepts, whereas a student in a wheelchair may learn even the most difficult material quickly. Even within the parameters of each type of disability, however, you will probably encounter a wide range of differences. Consider two students identified as having learning disabilities. One may display a low-average IQ and have extreme difficulty in mathematics; the other may have an extremely high IQ and have difficulty in reading. Both of these students have a learning disability, but you would not provide the same instruction for each of them or have the same expectations.

The point is, you should approach instruction for these children as you would for other students in the classroom: expect diversity, anticipate a range of abilities, and look for the particular strengths and learning profiles of each student. A helpful resource for recognizing student abilities and suggesting instructional strategies will be the special education teacher(s) in your school. The more you and a special education teacher can coordinate instruction and services for your students with disabilities, the better the students' educational experiences are likely to be.

expect diversity

Gifted and Talented Students

One of the most challenging types of students is the gifted or talented child. The gifted child is extremely bright, quickly grasping ideas and concepts you are teaching and making interpretations or extrapolations that you may not even have considered. Gifted children may also have a creativity that shows itself in original thinking or artistic creations.

Students who are gifted and/or talented are sometimes overlooked when educators talk about students with special needs. However, as one educator says, "Highly gifted children are as far from the norm in the direction of giftedness as the severely retarded are in the other direction."[11] Therefore, they do have special needs.

Although special educational care and services for students with disabilities have long been recognized and accepted, American education has been slow to accept the notion that gifted children require special adaptations in both curricula and teaching methods. Because the idea of giftedness implies an elitism to many Americans, it seems undemocratic to provide special services to children who already enjoy an intellectual advantage.

As a result of neglected needs, gifted and talented students drop out of school at rates far exceeding the rates of dropout for their nongifted peers. Many of those who stay in school feel unchallenged and become bored and apathetic. The result is that many of our brightest and most talented minds are being turned off or underdeveloped. Only recently have school districts begun to make serious efforts to identify gifted children and develop special programs for them.

high dropout rate

Identifying Gifted Students How do educators decide whether a student is gifted? A survey of definitions of the terms *gifted* and *talented* used by the education departments in each state reveals wide variations. The areas in which states

meanings of gifted and talented

identify gifted and talented students can range from intellectual to psychomotor to artistic, with many variations. But the term *talented* most often refers to an ability or skill (musical or artistic talent, for example) that may not be matched by the child's more general abilities, whereas the term *gifted* usually includes intellectual ability. However, this definition of giftedness is shifting away from an emphasis on general intellectual ability toward the recognition that giftedness occurs in a variety of areas, such as mathematics, language, spatial ability, and kinesthetics. Through its evolution, the study of giftedness has moved increasingly toward more *inclusive* definitions and away from more *exclusive* ones. Intelligence is now thought to be composed of many factors, not just one or two as was previously thought. Howard Gardner's work on multiple intelligences cited earlier in the chapter demonstrates this more inclusive thinking.

reliance on scores and grades

In their assessments of students' intellectual abilities, school districts have, in the past, tended to rely heavily on general intelligence and achievement tests, as well as on teacher recommendations and grades earned in school. There is a danger of letting the tools used to identify the children become synonymous with the *definition* of gifted and talented. To avoid this danger, teachers and administrators must study and interpret the data the tools provide rather than take the data at face value and use them for hard-and-fast cut-off points. Whether or not to recommend a child for a special program is a decision that should be made by the responsible teacher and other professional educators on the basis of their objective and subjective appraisals of the student, the nature of the gifted program or activity, and the atmosphere in which the student lives and goes to school. Parents should be a significant part of these discussions. The point is that the complexity of the variables involved requires that individual decisions be made by professionals using their best judgments rather than according to arbitrary, predetermined cut-off points on tests.

avoid cut-off points

The problem of identification is especially acute for bilingual children and children adjusting to a new culture, as well as for children in other minority groups. A major concern in the identification of gifted and talented students centers on the underrepresentation of economically disadvantaged students and certain minority students. In a national survey of eighth-graders enrolled in gifted and talented programs, only 9 percent of the students were in the bottom quartile of family income, while 47 percent of program participants were from the top quartile in family income.[12] Asian American students are well represented in gifted and talented programs, but African American and Hispanic students are underrepresented in terms of their proportion in the total school population. Thus, educators and parents are concerned that the measures being used to identify gifted and talented youngsters may work to the disadvantage of African Americans, Hispanics, and children from low-income families.

minorities underrepresented

Teaching Implications If your school or school district has special programs for gifted and talented students, you may be expected to work with resource teachers to help prepare individualized education plans for these students. Or, if you want to teach gifted students, your state may be one of the twenty or so that require you to receive a gifted endorsement to your teaching license. It is more likely, though, that you will discover certain students in your class to be gifted or

talented and, lacking any special program, you will be responsible for teaching these students as part of your regular class. What do you need to know?

guidelines for teaching gifted and talented students

1. Recognize that gifted pupils generally learn the standard curricular skills and content quickly and easily. They need teaching that does not tie them to a limited range, that is not preoccupied with filling them with facts and information but allows them to use the regular class as a forum for research, inquiry, and projects that are meaningful to them.
2. Realize that these students are persistently curious. They need teachers who encourage them to maintain confidence in their own ideas, even when those ideas differ from the norm.
3. Teach these pupils to be efficient and effective at independent study so that they can develop the skills required for self-directed learning and for analyzing and solving problems independently. Allow students of varying abilities to work together in areas of high interest, such as social action research projects.
4. Help students apply complex cognitive processes such as creative thinking, critiques, and pro and con analyses.
5. Expand your ideas concerning what instructional materials are available. Consider businesses, religious groups, national parks, and resource people as sources of potential instructional materials in addition to the textbooks and reference books available in the school. Be sure to investigate any technological resources that are available, including World Wide Web sites and other electronic links to information and to knowledgeable people outside the school.
6. Use various instructional strategies, such as flexible grouping, "tiered" assignments (in which all students explore the same topic but the level of questions or products produced varies depending on students' abilities), learning centers, student contracts, and mentorships.

If 2 + 3 is always going to be 5, why do they keep teaching it to us?

—A GIFTED FIRST-GRADE STUDENT

7. Implement *curriculum compacting*, in which teachers test students on what they already know on upcoming units. Students who demonstrate mastery in advance are allowed to accelerate through the material or pursue enrichment activities while the unit is being taught to the rest of the class.
8. Match students with *mentors* to help develop talent and engage students in relevant and applied problem solving. Mentoring programs encourage independent growth, increased self-confidence, and a willingness to reach out into new, untried areas.

The School's Response to Diversity

You may be getting concerned about whether you can handle the range of diversities you may face in your classroom. Be assured, however, that you are not in this alone. Besides other teachers and administrators to help you, most schools

have specialists who often can give you valuable advice or direct help to your students. At one time, the only business of schools was to educate students. But now, because of the increasing complexity and diversity of our students' lives, other needs are being addressed and incorporated into the way schools are approaching "education."

help for teachers

Various assistance systems have been devised to help the teacher respond to the range of student needs. Some of this assistance is in the form of support personnel such as nurses, school psychologists, counselors, and administrators. A growing number of parent councils involve parents in giving advice and helping to deal with problems. Teacher aides may be community members who speak the language of substantial minorities in the schools. Interns or students from the local college may help as well, providing another adult in the classroom.

In addition to support personnel, schools have tried to provide special programs to address some dimensions of student diversity. Multicultural and bilingual education, special education, and programs for gifted and talented students have all evolved out of concern that certain types and degrees of student diversity require different educational strategies to ensure an equal opportunity for intellectual stimulation and growth.

Multicultural Education

definition and goals

Multicultural education represents one approach to meeting the educational needs of an increasingly diverse student population. **Multicultural education** values cultural pluralism and seeks to enrich the cultural perspectives of all students. Spurred by the civil rights movement of the 1960s, multicultural education is a response to economic inequality, racism, and sexism in American culture. Originally used in conjunction with improving the lot of "people of color," the term has been broadened to include gender, disability, and other forms of diversity. Its goals include reducing prejudice and fostering tolerance, improving the academic achievement of minority students, building commitment to the American ideals of pluralism and democracy, and incorporating minority groups' perspectives into the curricula of our schools. Like the concept of cultural pluralism on which it is based, multicultural education rejects the notion of the melting pot, whereby minority groups are expected to abandon their group identities and become assimilated into a homogeneous American culture. Equally, multicultural education rejects separatist philosophies that would have each cultural group go its own way without trying to fit into an overall American culture.

different approaches

At least five different approaches to multicultural education have been identified, which helps to explain why the term often has very different meanings for different people:

1. "Teaching the exceptional and culturally different," which helps students achieve academically and socially within currently existing schools by building bridges between the students' backgrounds and the schools to make the curriculum more "user friendly."

2. "Human relations," which attempts to build positive relations among members of different racial/cultural groups and between males and females.
3. "Single-group studies," which focus on programs that examine particular groups, such as African American studies or women's studies.
4. "Multicultural," which promotes cultural pluralism by reconstructing the whole educational process around the perspectives of diverse racial, ethnic, cultural, and social classes.
5. "Multicultural and social reconstructionist," which teaches students to examine inequality and oppression in society and to take action to remediate these inequalities.[13]

Multicultural education is not just for members of minority racial or ethnic groups but for all students, including those with western European heritage. True multicultural education does not consist of only black history or women's history

For Better or For Worse
By Lynn Johnston
NOW, WE ALL KNOW THAT CANADIANS COME FROM MANY PLACES AROUND THE WORLD! WHAT DO WE CALL A COUNTRY THAT IS POPULATED BY MANY DIFFERENT KINDS OF PEOPLE!?
YES, APRIL?
MULTICLUTTERED!
THAT'S RIGHT, APRIL. WE LIVE IN A MULTICULTURAL COUNTRY, WHICH MEANS THAT MOST OF US HAVE ANCESTORS WHO CAME FROM OTHER PLACES!
MY ANCESTORS, FOR EXAMPLE, CAME FROM POLAND!
Cc Dd Ff Gg
WHERE DID YOUR ANCESTORS COME FROM, DUNCAN?
BARBADOS.
AND KIM?
TAIWAN!
I'M NATIVE INDIAN. MY PEOPLE HAVE ALWAYS LIVED HERE!
WE'RE FROM PAKISTAN!
IRELAND!
SCOTLAND!
SO NORTH AMERICANS COME FROM MANY CULTURES, AND WE COME IN MANY DIFFERENT COLORS, TOO!
BUT, LET'S TALK ABOUT SOMETHING MORE IMPORTANT THAN WHAT MAKES US DIFFERENT! WHAT ARE SOME OF THE THINGS THAT MAKE US ALL THE SAME?!
I KNOW! I KNOW! WE ALL GOTS BELLY BUTTONS!
WELL--IT'S A START.
© 1987 Lynn Johnston Ent. by Universal Press Syndicate
www.lynnjohnston.com

United Feature Syndicate

months. Instead of simply adding on information about particular groups, leaving the rest of the curriculum untouched, real multicultural education presents multiple perspectives and viewpoints to help students understand how events and facts can be interpreted differently by various groups. In addition to valuing cultural diversity, multicultural education is based on the concept of *social justice*, which seeks to do away with social and economic inequalities for those who have been denied these benefits of a democratic society. African Americans, Native Americans, Asian Americans, Hispanic Americans, women, individuals with disabilities, people with limited English proficiency, people with low incomes, members of particular religious groups, and individuals with different sexual orientations are among those groups that have at one time or another been denied social justice. Educators who support multicultural education see establishing social justice for all groups of people who have experienced discrimination as a moral and ethical responsibility.

social justice

An Ongoing Debate Many school districts are attempting to permeate their curricula with a multicultural emphasis, believing that attention to multicultural education is our society's best way to combat the prejudice and divisiveness among the different subcultures of our nation. By developing mutual respect for and appreciation of different lifestyles, languages, religious beliefs, and family structures, students may help shape a better future society for all its members.

concerns and controversy

Some educators, however, are concerned about what they believe are potential dangers of multicultural education in the schools. They fear that it may destroy any sense of common traditions, values, purposes, and obligations; that it may divert the schools' attention from their basic purpose of educating for civic, economic, and personal effectiveness; that it attacks the problem of minority students' underachievement by advocating an emphasis on self-esteem rather than hard work; that it substitutes "relevance" of subjects studied for instruction in solid academics; and that it may undermine a sense of morality because no universal moral positions are considered acceptable to all elements of our society. These critics do not argue against the need to preserve and value the achievements of the diverse ethnic and racial groups of our country, but they reject the position that everything is of equal value, that the schools have a responsibility to teach every possible belief and value, and that behavior is moral if it is believed to be so by any group.[14] These critics assert that there are limits to pluralism and that those limits must be articulated by schools and school leaders. Other critics of multiculturalism completely reject the concept of cultural pluralism, preferring an assimilationist perspective whereby schools are charged with forging one dominant American culture in which English is the only acceptable language.

Thus, the major thrusts of multicultural education are not without controversy. Multicultural education has often been cast as a reform movement, designed to address inequity and discrimination resulting from the race, religion, socioeconomic status, sex, age, exceptionality, or language of students.[15] As with any attempt to solve social problems, excesses and overexuberance can occur. Nevertheless, schools do need to accommodate larger minority populations in a way that removes barriers while preserving the basic purposes of schooling.

Bilingual Education

Students whose native language is not English constitute one of the most conspicuous failure groups in the American educational system. Because of their difficulty in speaking, writing, and understanding English, many of these limited English proficient (LEP) students fall further and further behind in school, and overwhelming numbers drop out before finishing high school.

The Government Response To cope with this problem, Congress passed the Bilingual Education Act in 1968, and subsequently amended it five times, to provide federal funds to develop bilingual programs. Much of the expansion of bilingual programs in the 1970s can be attributed to a series of court cases, the most notable of which was the 1974 U.S. Supreme Court case of *Lau* v. *Nichols.* The case involved a class action suit on behalf of Chinese-speaking students in San Francisco, but it had implications for all of the nation's non-English-speaking children. The Court found that "there is no equality of treatment merely by providing students with the same facilities, textbooks, teachers, and curriculum; for students who do not understand English are effectively foreclosed from any meaningful education." Basing its ruling on the Civil Rights Act of 1964, the Court held that the San Francisco school system unlawfully discriminated on the basis of national origin when it failed to cope with the children's language problems.

Lau *v.* Nichols

Although the *Lau* case did not mandate bilingual education as the means to solve the problem, subsequent state cases did order bilingual programs. With the advice of an expert panel, the U.S. Office of Civil Rights suggested guidelines for school districts to follow, the so-called Lau Remedies. The guidelines "specified that language minority students should be taught academics in their primary home language until they could effectively benefit from English language instruction."[16]

Bilingual Education Models Several types or models of **bilingual education** programs exist. In the *immersion model,* students learn everything in English. Teachers using immersion programs generally strive to deliver lessons in simple and understandable language that allows students to internalize English while learning academic subjects. The extreme case of immersion is called *submersion,* wherein students must "sink or swim" until they learn English. Sometimes students are pulled out for *English as a Second Language (ESL)* programs, which provide them with instruction in English geared toward language acquisition.

different models

The *transitional* model provides intensive English-language instruction, but students get some portion of their academic instruction in their native language. The goal is to prepare students for regular classes in English without letting them fall behind in subject areas. In theory, students transition out of these programs within a few years.

Maintenance or *developmental* bilingual education aims to preserve and build on students' native-language skills as they continue to acquire English as a second language.

The Battle over Bilingual Education

What's the Policy?

In 1998, voters in California passed Proposition 227, an initiative that called for ending bilingual education in the state, and a similar effort is under way in Arizona. The California law, which took effect in the fall of 1998, requires schools to teach limited English proficient students almost entirely in English except when at least twenty students in a given grade level are granted waivers to the law. If an insufficient number of students receive waivers in a given school, the school district must allow students to transfer to another school that offers bilingual education. Educators and legislators in other states will be closely following the progress of California's students as they consider implementing similar plans.

How Does It Affect Teachers?

Many teachers are withholding judgment on the effects of Proposition 227 until they have a sense of what it will mean in the long run for Latino student achievement. School districts vary greatly in their strictness or leniency in granting waivers to allow bilingual education programs. School districts that supported bilingual education before Proposition 227 have found ways to keep at least some bilingual classrooms, whereas in school districts without such support, bilingual education has been either eliminated or severely restricted. In the Oceanside school district in San Diego County, for example, of the 159 waiver requests received, only 5 were approved, which effectively meant that no bilingual programs needed to be offered. Even within a district, waiver rates vary tremendously from school to school. Some schools have even seen an increase in the number of students enrolled in bilingual classes since Proposition 227 was passed.

What Are the Pros?

Many teachers at Ditmar Elementary School in the Oceanside school district report surprise at how well their LEP students have progressed academically in English immersion. Some report rapid gains in students' oral English skills and in their requests to read books in English in the school library.

What Are the Cons?

Some teachers report that their students tune out as the day goes on because they can't keep up in English, while others say they have slowed the academic pace of their classes because it takes much longer to convey information. Still other teachers state that fewer students in their classes are ready to read compared to last year because the students' English vocabulary is much more limited than their Spanish vocabulary. Teachers in the upper elementary grades say they often pull students out of subjects such as science to do extra work in English so they can read their textbooks.

Lynn Gonzalez, a second-grade bilingual teacher at Ditmar, says, "This has been the hardest year of my life." She feels "enormous pressure" to make the school district look successful by producing English-proficient students by the end of the year, even though her training taught her that such proficiency takes at least three years. "I'm implementing something that goes totally against my beliefs," she says.

What Do You Think?

1. Do you support the intent of Proposition 227 to do away with bilingual education models other than structured English immersion? Why or why not?
2. If you were teaching LEP students who had had only one year of English instruction, what concerns would you have?
3. What might be some motivations for parents to request waivers to Proposition 227?

Source: Lynn Schnaiberg, "Calif.'s Year on the Bilingual Battleground," *Education Week*, June 2, 1999, pp. 1, 9–10.

Controversies Students with a native language other than English have two goals in school: learning English and mastering content. But the debate over how students can best reach those goals has become a divisive political battle.

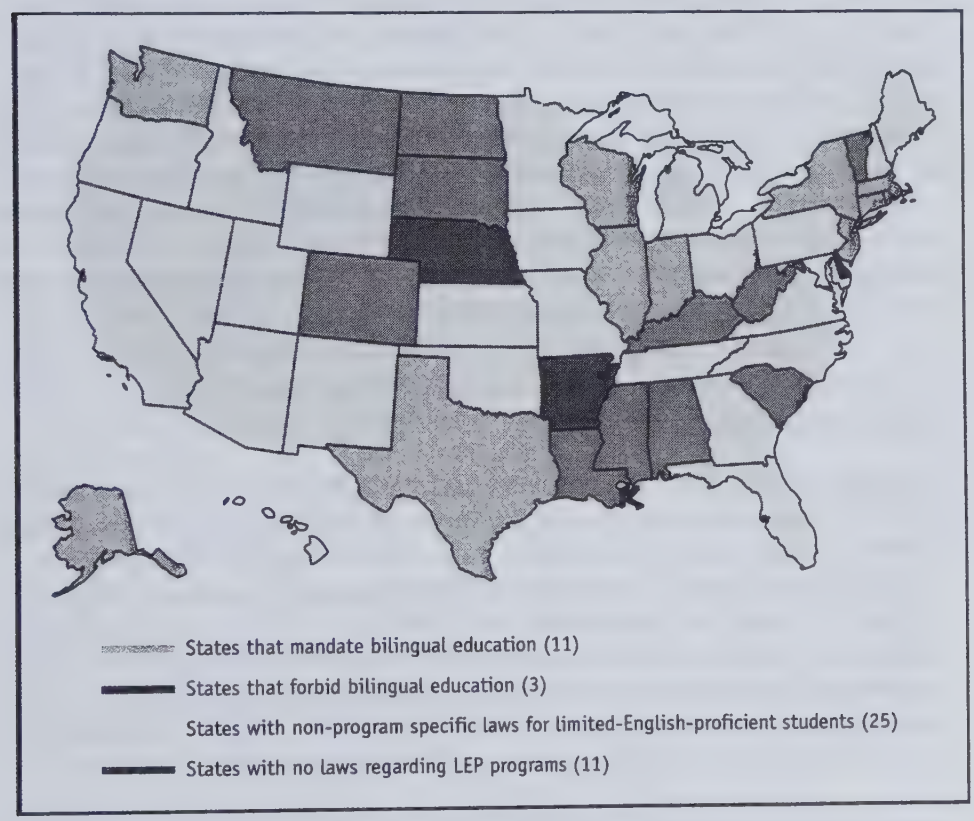
While some educators believe students who use English as a second language should be educated in their native language as well, critics insist such an approach doesn't work. The critics believe the best path to academic achievement for language-minority students in most cases is to learn English and learn it quickly. Too many bilingual programs, they say, place LEP students into slower learning tracks where they rarely learn sufficient English and from which they may never emerge. These critics basically support an immersion model of bilingual education but oppose the transitional and maintenance models. But supporters of transitional and maintenance models argue that students can best keep up academically with their English-speaking peers if they are taught at least partly in their native languages while learning English.

critics support immersion model

The transitional and maintenance models of bilingual education are in growing jeopardy, as first California and now other states threaten these bilingual programs (see Figure 3.2). In 1998, California voters passed Proposition 227, which called for LEP students to be taught in a special English-immersion

California abandons bilingual education

FIGURE 3.2 State Bilingual Education Requirements


States that mandate bilingual education (11)
States that forbid bilingual education (3)
States with non-program specific laws for limited-English-proficient students (25)
States with no laws regarding LEP programs (11)

Reprinted with permission from *Education Week* as found at www.edweek.org/context/topics/gallery/biling1.htm

program in which nearly all instruction is in English, in most cases for no more than a year, before moving into mainstream English classrooms. Proposition 227 basically ended transitional and maintenance models of bilingual education in California, except when sufficient numbers of parents specifically request that their children continue in them. Many parents, administrators, and teachers are concerned that all children, not just LEP students, will be affected as mainstream teachers grapple with students who may be unprepared to deal with grade-level work in English after one year in immersion. The legality of Proposition 227 is also being challenged in the courts. One year after voters approved Proposition 227, it appears that bilingual education continues to flourish in pockets across the state, but overall only about 20 percent of the students who were previously enrolled in such programs have requested to continue in bilingual education.[17]

many still support bilingual education

Whereas in the early 1970s language-minority speakers and their advocates fought for bilingual education as their right, today many of them are expressing doubts about the effectiveness of bilingual programs. Civil rights and cultural issues are giving way to concerns that non-native English speakers are just not sufficiently mastering the English language. But advocates say it is not fair to blame bilingual education for the slow progress some students are making. They cite research indicating that instruction in the native language concurrent with English instruction actually enhances the acquisition of English.[18] The problem is not bilingual education, they say, it's that becoming proficient in any second language takes longer than just one or two years. And they point out that there is a shortage of well-qualified, fully bilingual teachers, so that in many cases the problem with bilingual classes is not the curriculum but the quality of instruction.

need for bilingual teachers

Despite this controversy, many school districts are in desperate need of bilingual teachers, particularly those who speak Spanish and Asian languages. If you speak a second language or still have time to include learning a language in your college program, you could help meet a serious educational need and at the same time greatly enhance your employment opportunities. Speaking a foreign language, especially Spanish, is also an asset for the regular classroom teacher who may have Spanish-speaking students in class.

Special Education

Students with disabilities are another group in our schools who have received special attention to ensure equal educational opportunities. The term **special education** is often used as a designation for services designed for these students.

Public Law 94–142

In 1975, the federal *Education for All Handicapped Children Act (PL 94–142)* established the right of all students with disabilities to a "free appropriate public education." The law specified that each such student must be provided with an **individualized education program (IEP)** outlining both long-range and short-range goals for the child. Since that time, a number of other federal laws have reinforced and extended the commitment to special education.

early intervention

Preschool Legislation The *Education of the Handicapped Act Amendments (PL 99–457)*, passed in 1986, provided for early intervention for children from

HI, MISS EDWARDS! - HAVE A GOOD SUMMER?
SURE DID!
I WENT CAMPING WITH SOME FRIENDS, WE DID SOME CANOEING, SOME HIKING, SOME FISHING - AND SAW A LOT OF THE EAST COAST!
YOU DID ALL THOSE THINGS?
OF COURSE!
WHERE THERE'S A WHEEL, ... THERE'S A WAY!!

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birth to age two who are developmentally delayed. For states that choose to participate, programs must include a multidisciplinary assessment of the child's needs, a written **individualized family services plan (IFSP),** and case management. Services may draw from a variety of areas, such as special education, speech and language pathology, occupational or physical therapy, or family training and counseling, depending on the developmental needs of the child.

PL 99–457 also stated that a "free appropriate public education" must be extended to children with disabilities ages three to five years. Although state and local education agencies administer these programs, they may contract with other programs, agencies, or providers to provide a range of services, such as programs that are home based for part of the day. Families are recognized as playing a particularly important role in preschool education, and instruction for parents is to be included in the IFSP whenever that is appropriate and the parents desire it. When students reach school age, they are covered by the provisions of IDEA, discussed in the next section.

IDEA and ADA In 1990, Congress passed two significant federal laws: the *Individuals with Disabilities Education Act (IDEA)*, subsequently amended in 1997, and the *Americans with Disabilities Act (ADA)*. IDEA amended the 1975 Education for All Handicapped Children Act. ADA ensures the right of individuals with disabilities to nondiscriminatory treatment in aspects of their lives other than education.

basic provisions of IDEA

Six principles provide the framework of IDEA around which education services are designed and provided to students with disabilities:

- Free appropriate public education (FAPE)
- Appropriate evaluation
- An individualized education program (IEP)
- Least restrictive environment (LRE)
- Parent and student participation in decision making
- Procedural safeguards

Special education laws and practices have given disabled students many more opportunities to participate in activities from which they previously had been excluded. (© Tony Freeman/ PhotoEdit)

IEP's function

Because of the wide variety of disabilities and infinite degrees of severity in which these conditions may be found in individual students, IDEA mandates that an "appropriate education" be defined on an individual basis, using the written IEP first mandated in 1975. The IEP states the child's current levels of educational performance, short-term objectives and annual goals, services to be provided, and criteria and schedules for evaluation of progress. Thus, the IEP helps to ensure that the educational goals designed for the child are appropriate to individual learning needs and that these plans are actually delivered and monitored. Provisions must be reviewed and revised annually, and more often if necessary. Teachers, parents or guardians, special educators, other professionals, and (whenever appropriate) the child are all involved in the development and approval of the IEP. IDEA also requires that all older students with a disability (usually ages fourteen to sixteen) have an individualized plan for making the transition from school to work or additional education beyond high school through age twenty-one.

least restrictive environment

Like the original 1975 act, IDEA further stipulates that services for students with disabilities be provided in the **least restrictive environment (LRE)**, meaning students with disabilities should be educated with children who are nondisabled to the greatest extent appropriate. Determination of what constitutes an appropriate environment has been subject to great debate. The social and academic benefits of the regular classroom must be weighed against unique educational needs and individual circumstances for each child. The term **mainstreaming** has long referred to the practice of placing special education students in general education classes for at least part of the school day while also providing additional services, programs, or classes as needed. More recently, the term **inclusion** has been used to mean the commitment to educate each child, to the maximum extent appropriate, in the regular school and classroom.

mainstreaming

inclusion

Compared to mainstreaming, inclusion—particularly *full inclusion,* as it is sometimes called—generally indicates an even greater commitment to keeping students with disabilities in regular classrooms. Thus, it usually involves bringing the support services to the child rather than moving the child to services located in separate rooms or buildings.

Controversy over Inclusion Advocates of full inclusion argue that segregated education for students with disabilities is inherently unequal and therefore a violation of the rights of the children who are segregated. They also argue that traditional special education programs have resulted in a costly special education bureaucracy that has not shown the expected benefits in terms of academic, social, or vocational skills. Among the benefits of full inclusion for children with disabilities, they say, are higher expectations and better socialization, as well as greater acceptance of human differences by nondisabled children.

pros and cons of inclusion

Critics, on the other hand, say that both teachers and students are being hurt in the rush to embrace inclusion. Teachers have complained that they are given inadequate resources and training to deal with students with disabilities. Cases are cited in which teachers have been given sole responsibility for a class of thirty students, as many as ten of whom have disabilities. In too many instances, critics say, when children with disabilities are moved from resource rooms and self-contained classrooms into regular classrooms, the necessary supports don't follow. One reason is that some school districts use the cover of inclusion as a way to cut costs for special education services. Since 1967, when local and state expenses for special education services constituted 4 percent of all school expenditures, these expenses have increased more than fourfold.[19] With voter reluctance to increase school taxes and many school districts facing budget cuts as a result, some school boards and administrators see the inclusion movement as a way to save money by reducing funding for special education.

special education costs

Ideally, when students with disabilities are included in regular classrooms, their teachers receive special training as well as help from a special education teacher who serves as either a co-teacher or a consultant. True collaboration between general education and special education teachers is essential for inclusion to work effectively.

Even when such collaboration is possible, some special educators voice concern that full inclusion may result in diminished or inadequate specialized services for students who have special needs. They point out that the regular classroom may not be the best setting for every child. Violent or emotionally disordered children, for example, may pose a threat to themselves and their classmates. These educators are wary of eliminating the range of service delivery options currently available in favor of a pure inclusion model. Furthermore, they argue, there is little evidence that inclusion programs strengthen students' academic achievement. (However, the same criticism could be made of many special education programs.)

One thing is certain: inclusion of children with disabilities is becoming increasingly common in American schools. More and more students with disabilities are taking part in regular classroom life with their nondisabled peers. Inclusion seems to thrive in schools that have a shared vision of the school's

inclusion becoming widespread

The Personal Side of Inclusion

Cecelia Pauley is a sixteen-year-old sophomore in a Montgomery County, Maryland, high school. Last year was the first time she had ever attended regular classes like other students her age. As a result of her parents' insistence that she be educated as a regular student, Cecelia, who has Down syndrome, completed her freshman year but not without great effort on her part and with the help of her teacher and other students in her class.

Initially, Cecelia experienced great difficulties. She was always late for class, interrupted her teachers, and often asked inappropriate questions. She was often frustrated with the work and felt isolated from her peers. Because Cecelia had spent most of her academic career in special education courses with other students with severe disabilities, she was not used to the pace and expectations of a regular class. Nor were the other students used to someone like Cecelia.

A special education teacher became Cecelia's "case manager," whose responsibilities included figuring out how to meet Cecelia's needs without disrupting the classroom atmosphere. To assist in this process, Cecelia's parents contacted a private, nonprofit organization that trains nondisabled people to deal with those who have disabilities. This organization worked with students in her classes to help Cecelia stay focused on tasks, to hold her to high expectations, and both to encourage and to scold her on appropriate occasions. In each of Cecelia's classes, one student was identified as her "buddy" to help her manage her affairs. Cecelia succeeded in overcoming her initial difficulties and has made friends and succeeded in her schoolwork. Her teachers credit Cecelia and her parents with her success. Cecelia hopes to achieve a certificate of attendance, since the level of her work would not qualify her for a high school diploma.

In spite of Cecelia's success story, her teachers doubt that they could handle more than one severely disabled student in a class, and they question whether full inclusion would work for all severely disabled students.

Source: Stephen Buckley, "Making Room in the Mainstream," *The Washington Post,* June 12, 1993, pp. A1, A10. Copyright © 1993 *The Washington Post.* Reprinted with permission.

purposes; strong lines of communication among teachers, administrators, and parents; and cultures of innovation and reform. In many schools with successful inclusion programs, the presence of students with disabilities has sparked other reform initiatives such as cooperative learning, peer teaching, team teaching, authentic assessment, and interdisciplinary instruction.

Assistive Technology Just as many students use contact lenses or glasses to help them compensate for poor eyesight, students with disabilities may rely on a variety of technology-based innovations to help them learn better. The term **assistive technology** refers to the array of devices and services that help people with disabilities perform better in their daily lives. Devices such as motorized chairs, remote control units to turn on appliances, voice recognition systems, ramps to enter and exit buildings, and computers can all assist people with severe disabilities. Computers are especially important in allowing many students with disabilities to participate in normal classroom activities that would otherwise be impossible. Assistive technologies also exist for students with mild disabilities, including special software and multimedia materials to help them develop higher skill levels in spelling, reading, or math concepts.

assistive technology incorporated into IDEA

Congress incorporated definitions of assistive technology in IDEA, declaring that such technology must be provided whenever necessary as an element of free and appropriate public education. Thus, assistive technology must be considered a potential component of the IEP for each student with disabilities.[20] As a new teacher, you should be prepared to encounter situations in which a child uses technology as a medium for interaction and engagement within your classroom.

guidelines for teaching students with disabilities

Implications for Teachers How can you as a regular education teacher be effective in teaching children with disabilities in your classroom? Here are a few suggestions:

- First, be open to the idea of including students with disabilities in your classroom.
- Learn about each child's limitations and potential, and about available curriculum methodologies and technologies to help the child learn.
- Insist that any needed services be provided.
- Pair students with disabilities with children who can help them.
- Use a variety of teaching strategies, including hands-on activities, peer tutoring, and cooperative learning strategies.
- Avail yourself of opportunities for co-teaching with a special education teacher.[21]

Programs for Gifted and Talented Students

Programs for gifted and talented students exist in every state and in many school districts, but the exact number of students served cannot be determined because not all states and localities collect this information. We do know, however, that by 1994, thirty-two states reported serving almost 2.4 million K–12 gifted students and spending almost $500 million on gifted and talented programs.[22]

Current educational programs for gifted and talented students are quite varied. Some programs establish special schools that are designed only for gifted or talented students and have special admission requirements. In such schools, stimulating courses can be devised and taught without concern for students who might be unable to keep pace, and teachers as well as students can be recruited on the basis of their talents.

various approaches

Other programs adapt and enrich the regular school curriculum for gifted and talented children by grouping these students together for all or part of their instruction. This option normally is more flexible and practical than special schools. Classes can be established on a continuing or short-term basis, in any subject area, with the intention of either enriching or accelerating the student.

Although special programs and special schools for gifted and talented students do exist, these students are most likely to receive all, or nearly all, of their education in regular classrooms. In many school districts, in fact, separate programs for gifted students are being curtailed or phased out. There are two

primary reasons for this trend. One is the spread of a philosophy that favors mixed-ability grouping; the other is a lack of funds for separate gifted programs.

inclusion of gifted students

The move to meet gifted students' needs within the regular classroom is parallel to the inclusion movement in special education. Some advocates for gifted education programs are disturbed by this trend, concerned that gifted students will be shortchanged in the regular classroom. They fear that teachers will concentrate their efforts on struggling students or that gifted students will be drafted to serve as tutors for these students rather than working to their own potential. Supporters of the current trend, however, believe that most gifted students' needs can be met in the regular classroom if teachers can differentiate curriculum and instruction for them and increase the level of challenge.

Still others argue that it is important to keep a continuum of programs and services available for gifted students. Along with the regular classroom, these educators argue, the options should include pullout programs, special classes, and separate centers and schools. A range of giftedness exists, and whereas some students will do just fine in a regular classroom, others can benefit from different programs.

Nontraditional Programs

All of the school programs discussed so far in this section address student diversity in a somewhat "traditional" way; that is, they have evolved from the notion that the role of the school is to address issues that arise for children in a standard school setting during the course of the school day. However, a number of social conditions may complicate the issue of diversity. Social problems such as poverty, homelessness, or inadequate health care are such pervasive influences in some students' lives that we will discuss them in more detail in the next chapter. The more we examine "today's children," the more we realize that societal conditions and problems affecting our students cut across traditional lines of services delivery.

Interagency Cooperation In acknowledgment of the complexity and pervasiveness of these conditions and problems in the lives of children, programs are emerging that emphasize interagency cooperation in meeting the needs of individuals. For example, the coordinated school health initiative responds to the risk factors that threaten children and youth by providing coordinated school health services related to student health and success in school. The initiative assesses the health problems in particular school communities, builds consensus on what services should be provided, and puts together a comprehensive approach to improving children's health using agencies that address health, mental health, dental health, social services, recreation, and youth development. The guiding principle of the coordinated school health movement is that schools and communities can do much more with their current resources if they work together in partnership rather than as separate, isolated agencies. At least nine hundred school-based health centers are operating in the United States.[23]

social services provided through schools

The Comer Model James Comer, a public health physician and psychiatrist at Yale University, developed an initiative in New Haven, Connecticut, that emphasized structuring the environment to facilitate learning and development rather than placing blame and trying to change children. The "Comer model" attempts to change the climate of demoralized schools and to create a sense of community and direction by bringing together the principal, teachers, aides, and parents to form a school planning and management team. Services of the school social worker, the psychologist, special education teachers, and counselors are coordinated to provide a consultation team to support individual students and teachers as well as the school planning and management team. Comer notes, "Kids don't learn in pieces. That's why it is essential to address the entire social system of the school because of the way the many variables interact and because attitudes, morale, and hope all affect school performance."[24] (See the box on page 86 for more on Comer and his model.)

changing the school environment

Diversity: A Complex Phenomenon

The school programs described in this section have been designed to address student diversity and create a more equal educational opportunity for children in our school systems. An inherent danger in these approaches to addressing diversity, however, is the tendency to label children and form stereotypic images of who they are. Remember that student performance in school is affected by many factors, including social and cultural trends.

We encourage you, as a teacher, to remember that we are talking about *differences* in students, not necessarily deficits. The educational groupings we have been discussing are an administrative convenience, not a naturally occurring segmentation of children. Within each of these groups, each child will vary along a number of dimensions and have very different learning profiles of strengths and weaknesses.

differences, not deficits

The Teacher's Response to Diversity

So far in this chapter, we have presented a great deal of information about the diversity of the children you will be teaching. Ultimately, how these children are educated will come down to you and your daily interactions with them in your classroom. How will you deal with diversity?

Teacher-Student Disparity

Consider what we know about the typical teacher today. Women and whites predominate in the teacher force; 73 percent of all public school teachers are women, and 87 percent of those teaching in public schools are white.[25] Profiles of preservice and beginning teachers show similar gender, racial, and ethnic patterns.

the typical teacher

James P. Comer *(b. 1934)*

James Comer is a public health physician and psychiatrist who, through his work with low-income New Haven, Connecticut, schools, has shown that it is possible for low-income African American children to achieve at high academic and social levels.

After receiving his M.D. from Howard University in 1960, Comer entered the public health service. He became interested in the study of how policies and institutions interact with families and children, and began to see the school as the place to improve the life chances for children from difficult home situations. He decided that a career in psychiatry would enable him to address the social problems that plagued the people with whom he worked, and in 1964 he began his psychiatric training at Yale University.

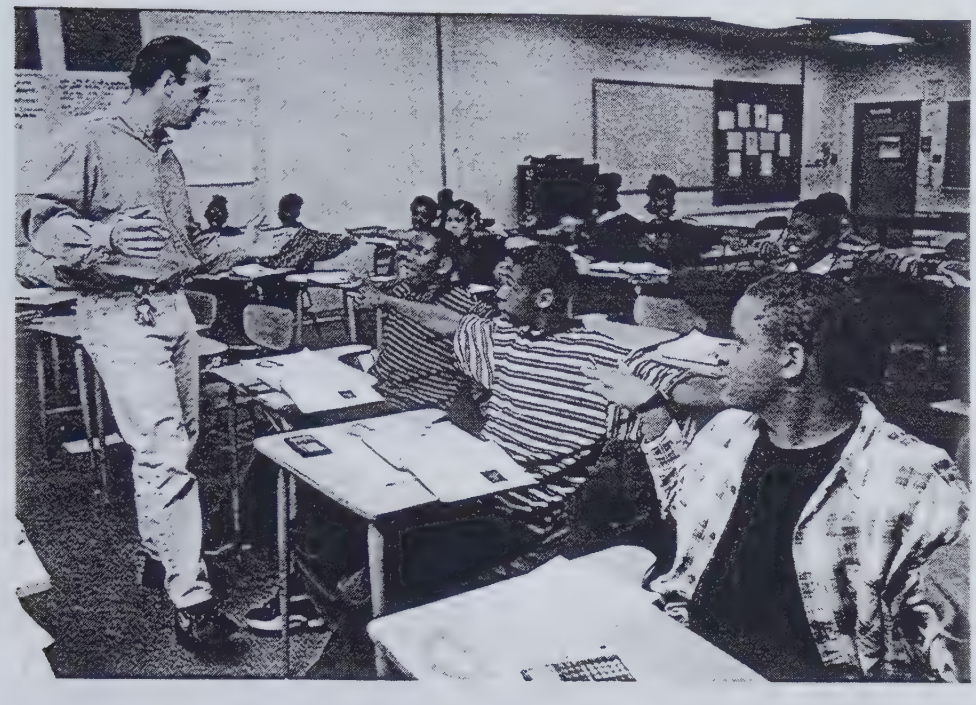
At Yale, Comer worked with the inner-city New Haven schools to find out why they were not helping African American children and how they could be made to do so. He wanted to give these children the same opportunities in life that education had given him. The more he worked with children, the more he came to believe that schools were the only places where children trapped in poverty and failure could receive the support their families could not give them.

With the help of a Ford Foundation grant, Comer became the director of the School Development Program with the New Haven public schools. A team of educational and mental health professionals consisting of Comer, school administrators and teachers, a social worker, a psychologist, a special education teacher, and other support staff worked to involve parents in developing a social skills curriculum that integrated academic disciplines. The curriculum included four major areas: politics and government, business and economics, health and nutrition, and spiritual and leisure time, all areas in which the students would need proficiency to succeed in school and to lead productive lives. Through the curriculum, the students became more aware of their community and of how their involvement in it could make a difference.

By adopting child development and behavioral science research, the team concentrated on problem solving rather than blame fixing and made decisions based on consensus. This consensus process gave each team member a sense of participation and ownership of decisions. The project was a great success: students' standardized test scores rose dramatically, project schools had higher attendance rates than other New Haven schools, and students graduated to become school leaders in their later schooling.

The "Comer model" emphasizes the social context of teaching and learning. No academic learning is possible, Comer asserts, unless there is a positive environment at the school where teachers, students, parents, and administrators like one another and work together for the good of all children. Built around three elements—a school governance team, a mental health team, and parental participation—Comer's model seeks to create schools that offer children stable support and positive role models. With the school and parents working successfully together, no conflict arises between home and school. The students learn desirable values, disruptions at school are reduced, and both teachers and students have more time and energy to focus on academic and social skills learning.

Among the many sites that have successfully implemented Comer's approach, now known as the School Development Program, are Washington, DC; Dade County, Florida; Dallas; Chicago; Detroit; San Diego; and New Orleans. Many school districts have chosen this program's structure and processes as a way to implement site-based management.



Teachers who are socially and culturally different from their students require solid pedagogical training to help them understand how to overcome these differences to promote student learning in effective ways. (© Elizabeth Crews)

Most of these teachers, moreover, come from relatively stable family backgrounds. The majority of teachers and future teachers in our classrooms, then, come from very different backgrounds than many of the students they teach. Despite efforts to increase the number of minority teachers (see Chapter 14), this gap between teachers and students is likely to continue for some time.

As we mentioned in Chapter 3, the more alike students and teachers are in social and cultural characteristics, the more they share tacit expectations about behavior and academic performance. But as social and cultural characteristics become increasingly disparate, teachers need to rely on solid pedagogical training to overcome these differences. The discrepancy between the cultures of today's typical teacher and the increasingly diverse students of the future emphasizes the growing importance of pedagogical training in sensitizing incoming teachers to the commonalities and differences among students, as well as in providing specific methods and techniques for addressing the plurality of culture and learning styles. Too often white educators have been reluctant to recognize that their own backgrounds and the culture of the school have an effect on learning. Rather than thinking of minority students as having a culture that is valid albeit different from theirs, they sometimes think of these students as deficient. Teachers are challenged to recognize the diversity of cultures represented by their students and to address these cultures in their teaching.

preparing for student diversity

Implications for Teachers

Given this profile of the cultural discrepancy between students and teachers, how can prospective teachers best prepare? Here are some steps you can take now:

steps to take

- Seek out experiences to broaden your understanding of societal and cultural commonalities and differences; for example, travel to foreign countries.
- Spend time in communities whose residents differ from you in terms of ethnicity, culture, or language.
- Volunteer in schools that differ from those you attended.

Once you have your own classroom, what can you do to address diversity there? Here are some guidelines:

- Learn about and appreciate the values and backgrounds of your students.
- Teach to your students' strengths rather than making them feel incapable or deficient.
- Provide a variety of educational experiences, and find ways for all students to achieve recognition from you and peers for being good at something.
- Involve your students' parents and other professional staff at the school to coordinate expertise and support so that students get a consistent message.
- Recognize that the schools' traditional emphasis on middle-class values such as individual learning and competition may clash with the values represented by their students' cultures. Teachers can provide opportunities for students to learn ways to succeed in today's dominant culture, but they must also respect the value systems in students' home lives and help them, in positive ways, to bridge the gap between the two worlds.

A Final Word

A major goal of this chapter has been to make you aware of the complexity of issues that directly affect many children's lives and their ability to get an adequate education. In our complex society, it is no longer feasible for the teacher to try to attend to all students' needs alone. You will need to use all the resources available to you, including parents and other professionals. Some teachers may initially feel threatened by this involvement or have a sense that the classroom is their "turf." But as we have seen throughout this chapter, our students need the coordinated expertise and support of all school professionals and the crucial link with parents to be given a fair shot at acquiring the good education that is their due.

KEY TERMS

limited English proficient (LEP)
socioeconomic status (SES)
assimilation
cultural pluralism

choice theory
multiple intelligences
learning styles
multicultural education
bilingual education
special education
individualized education program (IEP)
individualized family services plan (IFSP)
least restrictive environment (LRE)
mainstreaming
inclusion
assistive technology

FOR REFLECTION

1. How do you compare to the profile of the typical teacher described at the end of this chapter?
2. How can you help prepare yourself for the diversity you are likely to encounter in the classroom? What experiences with diversity will you bring to the classroom?
3. What are the pros and cons of living in a pluralistic society? In your opinion, is this preferable to a "melting-pot" or assimilationist approach to diversity?
4. What are the general characteristics of your learning style? How can you capitalize on them in your teaching? How will you account for various learning styles in your students?
5. Have you had any contact with individuals with disabilities (for example, a relative or neighbor)? What did you learn from this relationship that might be helpful in your teaching?
6. Would you like to be a teacher of gifted or talented children? Why or why not?
7. What other elements of diversity will you find in your students that have not been discussed in this chapter? How will you be sensitive to these differences?

FOR FURTHER INFORMATION

Cole, Robert W., ed. *Educating Everybody's Children: Diverse Teaching Strategies for Diverse Learners.* Alexandria, VA: Association for Supervision and Curriculum Development, 1995.
This text presents research-based but practical instructional strategies for teaching diverse students.

Delpit, Lisa. *Other People's Children: Cultural Conflict in the Classroom.* New York: The New Press, 1995.
Asking why schools have such a hard time making school a happy place for poor children and children of color, the author concludes that most classrooms are dominated by a white perspective and too few teachers acknowledge that children of color have perspectives of their own.

Gardner, Howard. *Multiple Intelligences: The Theory in Practice.* New York: Basic Books, 1993.
A mixture of previously published articles and lectures, as well as chapters written specifically for this book, all explain the theory of multiple intelligences and how it can be applied in today's schools.

Nieto, Sonia. *The Light in Their Eyes: Creating Multicultural Learning Communities.* New York: Teachers College Press, 1999.
This book draws on research in learning styles, multiple intelligences, and cognitive theories to portray the ways in which students learn. It also discusses the social context of learning and the influence of culture on learning.

Pugach, Marleen C., and Cynthia L. Warger, eds. *Curriculum Trends, Special Education, and Reform: Refocusing the Conversation.* New York: Teachers College Press, 1996.
Arguing that the reform agenda must address the needs of all children, including those with disabilities, this volume gives practical suggestions for doing so in different curriculum areas.

SEARCH

University of Virginia. *Office of Special Education: A Web Resource for Special Education.* World Wide Web site at http://curry.edschool.virginia.edu/go/specialed
This web site at the Curry School of Education, University of Virginia, contains much information about special education, including the history of the field and types of disabilities. It also offers discussion groups, electronic addresses of special educators, and much more.

4 What Makes a Teacher Effective?

CHAPTER PREVIEW

Effective teaching is much more than an intuitive process. A teacher must continually make decisions and act on those decisions. To do this effectively, the teacher must have *knowledge,* both theoretical knowledge about learning and human behavior and specific knowledge about the subject matter to be taught. A teacher also must demonstrate a repertoire of teaching *skills* that are believed to facilitate student learning and must display *attitudes* that foster learning and genuine human relationships.

This chapter emphasizes that

- Teachers are required to make many decisions as they plan for instruction, implement teaching strategies, and evaluate outcomes of their planning and strategies.
- Four major types of teacher attitudes affect teaching behavior: (1) attitude toward self, (2) attitude toward children, (3) attitude toward peers and parents, and (4) attitude toward the subject matter.
- A teacher should have an intimate knowledge of the subject matter being taught, both the instructional content and the discipline from which it derives.
- To be able to recognize and interpret classroom events appropriately, a teacher should be familiar with theoretical knowledge and research about learning and human behavior.
- Effective teachers demonstrate a repertoire of teaching skills that enable them to meet the different needs of their students. Research has identified a number of these skills in, to name a few areas, classroom management, effective questioning, and planning techniques.

We once knew a teacher who was described as having not twenty years of experience but one year's experience twenty times. The message was that this teacher had stopped growing and developing as a professional after the first year. As someone just starting in your teaching career, this may seem like a remote possibility. After all, there's so much that you know you don't know, and you're eager to learn as much as you can. It is relatively easy, however, to fall into comfortable patterns of teaching, especially after you have gained a few years of experience. How can you avoid this complacency and stagnation?

One way is to maintain your curiosity and develop habits of inquiry and reflection. More and more teacher educators are coming to believe that although it is important to prepare beginning teachers for initial practice, it is even more important to help them develop the attitudes and skills to become lifelong students of teaching. Ideally, rather than relying on authority, impulse, or unexamined previous practice, teachers will continually examine and evaluate their attitudes, practices, effectiveness, and accomplishments. This process of examination and evaluation is often called **reflective teaching**. Reflective teachers ask themselves such questions as "What am I doing and why?" "How can I better meet my students' needs?" "What are some alternative learning activities to achieve these objectives?" "How could I have encouraged more involvement or learning on the part of the students?" Even when lessons go well, reflective teachers analyze the lesson to determine what went well and why, and how else things might have been done.

developing the habit of reflection

Developing the habits of inquiry and reflection should begin in the teacher education program. Experiences with schools, teachers, and students will give you many opportunities to reflect on what has occurred. The use of journal writing, observation instruments, simulations, and videotaping can help you examine teaching, learning, and the contexts in which they occur. Comparing your perspectives with those of classmates, professors, and school personnel will broaden your interpretations and give you new insights. As you reflect on your experiences, you will come to distrust simplistic answers and explanations. Nuances and subtleties will start to become clear, and situations that once seemed simple will reveal their complexities. Moral and ethical issues are likely to be encountered and thought about. By practicing reflective teaching, you will grow and develop as an effective, professional teacher.

This chapter will discuss some basic characteristics of effective teachers that you can use as a starting point for your own reflections. We begin with a case study of a new teacher who faces problems that many classroom veterans will find familiar.

the case of Carol Landis

CASE STUDY

Carol Landis: A Case of Classroom Decision Making

As an example of how ordinary teaching situations can lead to useful reflections about effective teaching, consider the case of Carol Landis. Carol is beginning her first year of teaching. She prepared to be a high school social studies teacher, graduated, and accepted a job in her own community, a small city in the Northwest. Most of her students come from solidly blue-collar, working-class backgrounds.

Case Study cont'd

Carol has been assigned three periods of world geography and two periods of American history. We'll join her as she prepares the first lesson of a new unit in world geography.

Carol plans to require her ninth-graders to work in groups to prepare panel discussions about a country of their choice. She wants the groups to research the relationships among the geography, political history, and culture of a country and share what they find in panel discussions with the rest of the class. Carol sets these goals for her students: that they work together in groups and that they make effective oral presentations of their research.

Carol's questions

When planning how to present the assignment to her classes, Carol has many questions. Do these students know how to use the library? If not, will she need to provide directions for using reference materials? Maybe the librarian has already done this, and they'll just need a review. Do these students know what *culture* means or understand general concepts that will help them look for relationships among culture, history, and geography? What background do they need before they start researching a specific country? And do these students know how to work in groups? Have they ever participated in a panel discussion? In planning how to help her students complete this assignment, Carol bases her decisions on what she thinks she knows about them as learners.

Although Carol has already planned this assignment to fit into the social studies curriculum, she is concerned about whether the books in her room and the library will provide the information her students need. What other resources are available? She knows that other teachers have back issues of *National Geographic,* for example. Maybe she could help students use the World Wide Web to access hypertext links that would tie together geography, political history, and culture for their respective countries.

In addition to the panel discussions, Carol has considered having each student submit a written report. But for this first research assignment, she decides that an oral presentation by the group is appropriate. Later, she'll work with the classes on report writing. In the beginning, she wants her students to enjoy her classes, to feel a part of a group, and to get to know one another. And Carol prefers listening to her students to grading written reports anyway, so this assignment fits her style of teaching.

Despite her planning, when Carol reflects on her second-period class after the first day of library research, she wonders what went wrong. One group argued the whole period and never did select a country. Maybe she should have assigned groups and not let students choose their own partners? She tried to ignore the group, believing they should work out their own differences and come to a group decision. But what if they never work together? She noticed that another group was completely dominated by one of the top students. He decided what country they would research, he assigned the topics, and he told the others where to look for information. When Carol urged the other members to share equally in the group decisions, they asserted, "Tom always gets A's. We don't mind if he tells us what to do." Carol didn't know how to respond to their concern for grades without insulting Tom. So she said nothing.

incident with Tom

Later in the period, Tom asked her what religion predominated in Indonesia. Carol wasn't sure but was afraid to admit her lack of information, so she told him, "Just look

Case Study cont'd

it up." Tom responded, "So you don't know either?" Carol testily told Tom that she was not his personal encyclopedia. Now she wonders if she overreacted. Maybe she should have admitted she didn't know. Was Tom challenging her authority, or was he just reacting to the sharp tone in her order to look it up? Did she turn Tom and his group against her?

Carol also wonders whether the other groups worked productively. She spent so much time watching the arguing group and Tom's group that she didn't have time to notice whether the chatter from the other groups was work or play. Maybe it didn't hurt to let the other groups have some fun today, anyway. She can direct her attention to them tomorrow.

Carol's frustrations

There is so much to watch and monitor when students work in groups, Carol realizes. And so many questions: "Where do I find this?" "Mr. Shaw won't lend me his magazines; what do I do now?" "This library stinks. Why do we have to do this assignment anyway?" "Miss Landis, what did you do this weekend?" Carol wonders if she will ever learn to field all her students' questions and comments and distinguish the words on the surface from the real messages. And what to do about Ron, who started reading a novel about life in Siberian concentration camps? Carol thinks it is the only book she has ever seen him read. But it won't help his group do their project on Zaire.

Maybe this assignment wasn't such a good idea in the first place, Carol thinks. Or maybe she just wasn't up to working with her classes in groups. The stares from the librarian and the study hall teacher indicated that they didn't think she could handle her classes. And Carol hasn't even thought about how she will grade her students' panel discussions. Just thinking about it all exhausts her. How will she ever get through another day with that second-period class?

The Teacher as Decision Maker

Carol as decision maker

We present Carol's case to illustrate that the teacher's role can be described as one of *decision maker*. Indeed, some educational researchers have identified skill in decision making as the most important teaching skill. Some decisions are made as teachers quietly deliberate curricular and instructional goals; many more must be made almost instantaneously as teachers and students interact. Let's look at some of the particular decisions that Carol made or will make, dividing them into three basic stages: planning, implementing, and evaluating.

Planning Decisions Carol wants her students to understand the relationships among geography, history, and culture. But what exactly does she want them to know about these relationships? She must decide the particular kinds of understanding she wants her students to achieve, and this decision affects her choice of teaching techniques.

From a variety of possible techniques, she has chosen independent group work. She has also decided that a panel discussion will provide evidence of her students' learning. These decisions reflect Carol's personal preferences, her goals for her students' learning, and her skills in methods of evaluating their learning. Her decisions are also based on a series of judgments about her students' ability

to do research, work in groups, and present panel discussions, as well as on judgments about how long they will need to work together and what resources they will need.

Implementing Decisions As Carol teaches this lesson or series of lessons, she has to decide when and how to intervene with some of her groups, whether to allow Ron to continue reading a novel, and what responses to make to students' questions.

Evaluating Decisions After the first day's library work, Carol examines her interactions with the students, facing decisions about what adjustments to make in her strategies for the next day. As the groups continue to work, she will also face decisions about how to evaluate the impact of her planning and instruction on her students' learning.

In each of these planning, implementing, and evaluating stages of instructional decision making, Carol chooses among alternative concepts her students could learn, approaches to help them learn the concepts, ways to manage the classroom to encourage their learning, and ways to measure their learning. Could her decisions improve with more adequate knowledge, skills, and attitudes?

Aspects of Effective Decision Making

In the rest of this chapter, we will explore the areas of competence that help teachers make more effective decisions. We, along with many other educators, believe that to be effective decision makers, elementary and secondary school teachers need to have attitudes, knowledge, and skills particular to the teaching profession. Teachers must ask themselves not only "What am I going to teach?" but also "What should my students be learning?" "How can I help them learn it?" and "Why is it important?" To answer these questions, teachers must be familiar with children and their developmental stages. They must know something about events occurring outside the classroom and about what society requires from the young. They must have enough command of the subject they teach to be able to distinguish what is peripheral from what is central. They must have a philosophy of education that guides them in their role as teacher. They must know something about how human beings learn and about how to create environments that promote learning.

areas of teaching competence

What are the specialized skills and attributes of the effective instructional decision maker? The four areas of competence that we consider essential for a teacher are the following:

1. Attitudes that foster learning and genuine human relationships
2. Knowledge of the subject matter to be taught
3. Theoretical knowledge about learning and human behavior
4. Skills of teaching that promote student learning

Differences Between Expert and Novice Teachers

A number of educational researchers have tried to identify expert and experienced teachers and compare them with ordinary or novice teachers. These studies have identified various ways in which novice and expert teachers differ.

We can think of an expert teacher as similar to an expert chess player. Expert chess players quickly spot trouble areas in any chessboard pattern; likewise, expert teachers quickly recognize trouble spots in a classroom setting. Experts in chess or teaching draw on their hours of experience to build a repertoire of recognizable patterns. In one experiment, expert and novice teachers were asked to look at a photograph of a classroom and identify the class activity. Experts were better able to "read" the classroom, making inferences about what was happening in the picture. When observed in action, expert teachers also show greater ability to gather information in a short time for multiple purposes. For example, an expert teacher may be able to accomplish many tasks in an opening review session: gather attendance information, identify who did or did not do the homework, and locate students needing help with the next lesson.

In comparison, novice teachers described the surface characteristics of the classroom pictures they saw. And when presented with descriptions of student problems, the novices relied again on the literal features of the problems to suggest solutions. Their analyses did not correspond with the higher-order classifications used by expert teachers.

Experts differed from novices in their approaches to planning as well. In a simulated task of planning, experts focused on learning what students already knew about the subject matter to be learned, while novices planned to ask students where they were in their textbooks and then present a review of important concepts. In other words, experts planned to gather information from the students, whereas novices planned to give information to them.

The research suggests that experts in any field demonstrate skill in planning and in classifying problems and formulating solutions. This is no less true for teachers: the expert teacher shows problem-solving skills like those of other experts, whether in chess, bridge, or physics. The studies also indicate that the process of moving from novice to expert teacher takes considerable time because extensive experience is necessary to develop enough episodic knowledge to interpret information about classrooms.

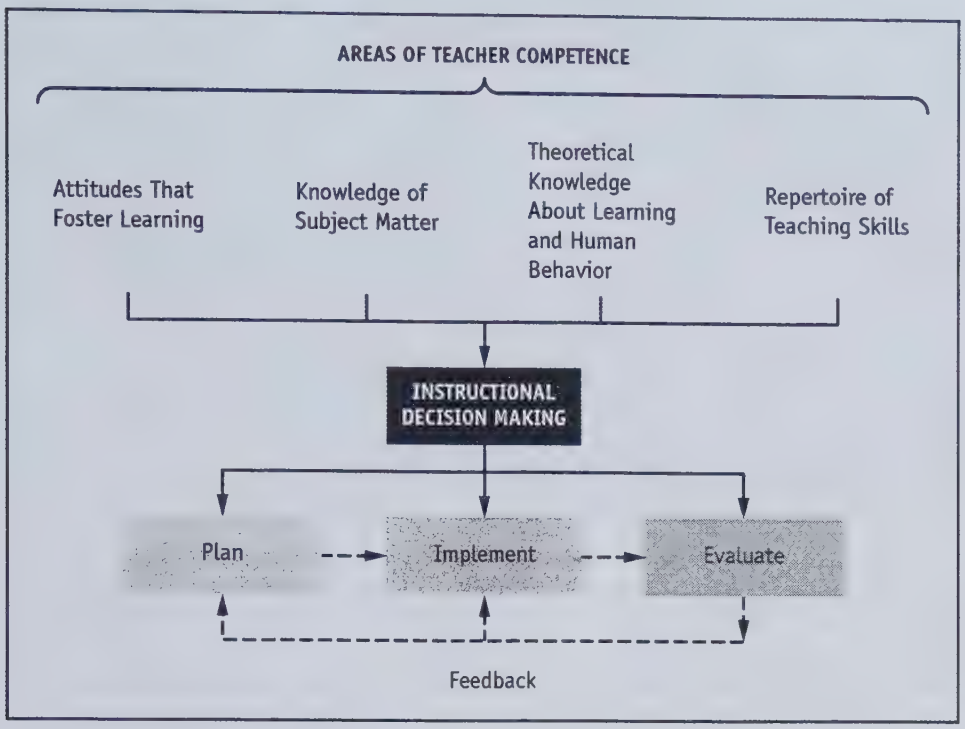
Sources: David C. Berliner, "Expertise: The Wonder of Exemplary Performances," in *Creating Powerful Thinking in Teachers and Students*, ed. J. N. Mangiere and C. C. Block (Fort Worth, TX: Harcourt Brace College Publishers, 1994), pp. 161–186; Greta Morine-Dershimer, "Instructional Planning," in J. M. Cooper, ed., *Classroom Teaching Skills*, 6th ed. (Boston: Houghton Mifflin, 1999), pp. 32–33.

Teachers draw on their competence in these four areas to inform the many decisions they make as they plan instruction and as they spontaneously interact with the students in their classes. Figure 4.1 indicates the relationship of these areas of competence to the process of instructional decision making. In the remainder of this chapter, we'll examine these areas of competence, now and then referring to the instructional decisions that Carol made and the attitudes, knowledge, and skills influencing her decisions.

What Attitudes Does the Effective Teacher Possess?

Many people believe that the teacher's personality is the most critical factor in successful teaching. If teachers have warmth, empathy, sensitivity, enthusiasm,

FIGURE 4.1 Relationship of Teacher-Competence Areas to Process of Instructional Decision Making



Source: From James M. Cooper (ed.), "The Teacher as a Decision Maker," in *Classroom Teaching Skills*, Sixth Edition. Copyright © 1999 by Houghton Mifflin Company. Reprinted with permission.

and humor, they are much more likely to be successful than if they lack these characteristics. In fact, many people argue that without these attributes, an individual is unlikely to be a good teacher.

For years, educational researchers sought to isolate the characteristics essential to good teachers. In one comprehensive study, the researcher concluded that effective teachers are fair, democratic, responsive, understanding, kindly, stimulating, original, alert, attractive, responsible, steady, poised, and confident. Ineffective teachers were described as partial, autocratic, aloof, restricted, harsh, dull, stereotyped, apathetic, unimpressive, evasive, erratic, excitable, and uncertain.[1]

But this information is not very useful. After all, what human interaction wouldn't be improved if the participants possessed only positive traits? Two researchers, summarizing fifty years of research on teachers' personalities and characteristics, conclude, "Despite the critical importance of the problem and a half-century of prodigious research effort, very little is known for certain about the nature and measurement of teacher personality, about the relation between teacher personality and teaching effectiveness."[2]

definition of attitudes

A person's *attitudes,* or predispositions to act in a positive or negative way toward people, ideas, and events, are a fundamental dimension of his or her personality. Although the relationship between general personality traits and teacher

Anne Mansfield Sullivan *(1866–1936)*

The proof is in the pupil. In this case, Helen Keller, a blind and deaf pupil, was a terror. Wily and mean, Helen was also animal-like. Nevertheless, her teacher, Anne Sullivan, enabled her to become an international celebrity.

Sullivan pioneered the teaching of individuals without sight and without hearing. Today we speak of a *deaf culture,* but this term was not used in the era of Anne Sullivan. "Teacher," as Helen always called her, is credited with making it possible to reach students who were thought to have mental retardation.

The daughter of Irish immigrants, Sullivan was born in Feeding Hills, Massachusetts, on April 14, 1866, and entered the almshouse at eight when her mother died and her father abandoned her and her brother. Half-blind herself, she went to the Perkins School for the Blind in Boston at age fourteen without a toothbrush, hat, or coat; her only possessions were a shirt and stockings tied in a bundle.

At age twenty-one, Sullivan took a job offered by the Keller family in Tuscumbia, Alabama, to teach the Kellers' daughter, Helen. Helen Keller was an angry and frustrated child, but not stupid. Sullivan saw this and began her assault on Helen's locked mind. Within a month, she made contact with Helen in the now famous pump story, immortalized in the drama *The Miracle Worker.* Sullivan fingerspelled words into Helen's hand, each word suiting an action. Finally, Helen, feeling water over her hand, realized the connection between word and object. She had broken the code and realized that everything had a name.

Sullivan's methods were practical. She taught Helen to play through games and exercises, stimulating her to ask the names of the motions. She kept a menagerie of animals for Helen to help her understand movement. She progressed to abstractions like peace and God as soon as her pupil was ready.

Sullivan wanted to make Helen as normal as possible, giving her every experience she could. She worked at teaching her to sit, stand, and walk properly. As soon as Helen could distinguish between right and wrong, "Teacher" sent her to bed for misdeeds. Laziness, carelessness, untidiness, and procrastination were dealt with by ingenuity, humor, and light sarcasm.

Helen used the manual alphabet for three years before she began to speak. When Helen was nine, Sullivan was rewarded with the words "I am not dumb now." It was one of the most dramatic achievements in the history of teaching.

Sullivan's great discovery was that a child should not be taught each word separately by a separate definition but instead should be given endless repetition of language he or she does not understand all day long. Sullivan continually spelled words into Helen's hand to mimic the way a hearing child in the cradle absorbs words. This method had never before been put into practice in the education of a deaf child, especially a deaf-blind one.

When Helen attended a school for deaf pupils in New York, Annie Sullivan went along. At Cambridge School and Radcliffe, Sullivan attended classes, interpreting instruction and looking up words for Helen. She made herself eye and ear to Helen and supplied knowledge to a starving mind as she fired her pupil's drive to study hard. After college, Sullivan accompanied Helen on worldwide lecture tours as Helen became a famous author and personality. Extraordinarily close, teacher and pupil spent much of their lives together. The name "Teacher" has been enriched by Annie Sullivan's dedicated life, persistent high standards, and creative instruction.

Source: Marilyn Ryan.

A teacher's positive attitude toward self and students can help create an environment conducive to learning. (© Elizabeth Crews)

effectiveness has proven elusive, almost all educators are convinced of the importance of teacher attitudes in the teaching process. Attitudes have a direct, though often unrecognized, effect on our behavior in that they determine the ways we view ourselves and interact with others.

four categories of teacher attitudes

We believe four major categories of attitudes affect teaching behavior: (1) the teacher's attitude toward self, (2) the teacher's attitudes toward children and the relationship between self and children, (3) the teacher's attitudes toward peers and pupils' parents, and (4) the teacher's attitude toward the subject matter.

The Teacher's Attitude Toward Self: Self-Understanding

If teachers are to help students have meaningful experiences, develop their aptitudes and abilities, face their inner difficulties, and accept themselves as people, they need to know and understand those students. But before teachers can do that, they must work at knowing and understanding themselves. Empirical evidence from psychology indicates that people who deny or are unable to cope with their own emotions are unlikely to be capable of respecting and dealing with others' feelings.

recognize own needs as well as students'

For example, unless teachers recognize their own needs and anxieties, they will be unlikely to understand and empathize with their students' needs or expressions of anxiety. They may not recognize that students' inabilities to learn, inattentiveness, impudence, or irritability may be the result of anxiety. Teachers also need to recognize that their own anxieties may make them irritable, causing the students in turn to feel anxious and to show similar symptoms.

Ways to Achieve Self-Understanding How can one achieve understanding of self and, after achieving it, accept it? A number of potential resources can help promote self-understanding. For example, books by sensitive and compassionate

people who have made progress in their own struggles to know themselves can be a valuable aid in self-examination. For prospective teachers, such books might include Sylvia Ashton-Warner's *Teacher,* an account of her teaching experience in a Maori infant school in New Zealand; Tracy Kidder's *Among Schoolchildren;* Herbert Kohl's *36 Children;* and Lisa Delpit's *Other People's Children.*

books about teachers

observing in classrooms

Another method is **participant observation,** the process of observing a class and recording what you hear, see, and feel as you observe. You then compare your record with the records of other observers. This experience may show you that what you notice in any given situation is determined largely by habits of thought that you take for granted. It may also show that your "objective" perceptions are often projections of your own subjective state, and so may tell you more about yourself than about the people you have observed.

college and self-examination

Some colleges offer sessions run by trained leaders, as well as personal counseling sessions, to help you face and cope with feelings of limitation, insecurity, inferiority, or confusion, the need to be liked and approved of, lack of direction,

What Would You Do?

1. You are a woman, a beginning teacher in a ninth-grade English course. As the first semester proceeds, you realize that one of your students, Fred, has a crush on you. He is always volunteering to help you pass out papers, and he lingers after class each day to talk to you. He finds out your home address and comes to visit you one Saturday morning. His actions are becoming obvious to the other students, who are starting to kid him about his infatuation.

   What would you do?

2. You are generally recognized as one of the most popular teachers in your school. The students look upon you as a friend who can be trusted, and you have told them that if they ever have problems, school-related or personal, they should feel free to come to you. One day Maryanne, a junior in one of your classes, seeks you out. Close to hysteria, she tells you she is ten weeks pregnant. You are the first person she has told. She begs you for advice, but insists you do not tell her parents.

   What would you do?

3. You are a sixth-grade teacher. Until recently, you have been quite comfortable in your class of twenty-seven children. About three weeks ago, you had to speak to Debbie. Although she is the brightest student and the natural leader in your class, she was continually talking when you were trying to address the class. Since then she has been as cool as ice to you. But, more worrisome, she has turned the class against you. They seem hostile, and there are continued signs of lack of cooperation. The principal wants to talk with you because she has heard many complaints recently.

   What would you do?

4. You are a white teacher in a somewhat racially tense school. There are seven African American students in one of your classes. Because you fear alienating the African Americans and being accused of prejudice, you make special efforts to treat them fairly. One day three of your white students come to see you and accuse you of coddling the African Americans and discriminating against whites.

   What would you do?

5. You teach in a school that uses a letter grading system. You have assigned your students a term paper. You know that one student has spent hours and hours on his report, but its quality is quite poor. The student has already expressed his hope that you will take effort into account when grading the reports.

   What would you do?

and other problems. We urge you to regard self-examination as a serious commitment and to undertake it, *as a prospective teacher,* in an effort to make a good decision about whether to teach and to become the best teacher you are capable of becoming.

Remember Carol's attitude toward Tom when he asked for information she didn't have. And recall her seeming "live and let live" attitude toward the argumentative group and the student reading a novel. What may these attitudes about student behaviors indicate about Carol's self-concept? Is she afraid to admit limitations in her knowledge? Does she hesitate to discipline off-task behavior because she thinks her students will no longer like her? How strong is her need for approval? Maybe Carol overreacts to Tom's request for information because she is insecure with the role of teacher and feels threatened by his authority among his peers. Although Carol's case does not give enough information to answer these questions, we can say with confidence that her self-concept will influence her behavior toward her students. As Carol develops a realistic understanding of herself and her needs and anxieties, she will change her attitudes toward her students and improve her relationship with them.

Carol's self-concept

The Teacher's Attitude Toward Children

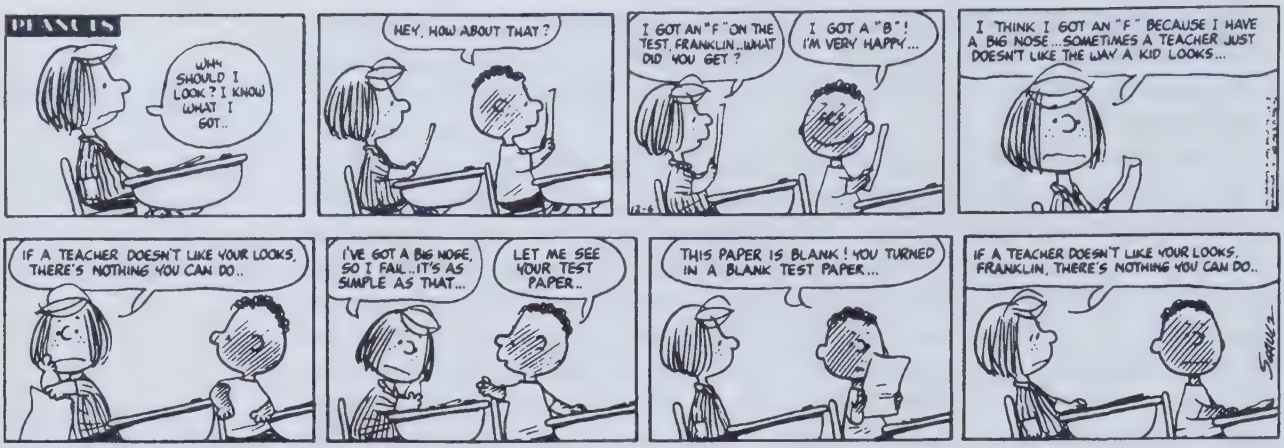
Children are sensitive observers of adult behavior, and they often see, and become preoccupied with, aspects of the teacher's attitude toward them of which the teacher may be unaware. Consider how a teacher's effectiveness might be reduced by these feelings or attitudes toward students:

negative attitudes

- A strong dislike for particular pupils and obvious fondness for others
- Biases toward or against particular ethnic groups
- A bias toward certain kinds of student behavior, such as docility or inquisitiveness
- An uneasiness in working with children who have disabilities

Few teachers are entirely free of negative attitudes at the outset, and self-awareness can be the crucial factor distinguishing a teacher who is able to control and change these attitudes. Thus, it is important that prospective teachers confront their own attitudes early on, perhaps through case studies, group discussions, role playing, or behavioral records of teaching experiences. When we become aware of our attitudes, we can often control our behavior better, but even then change is neither easy nor automatic. It is difficult to admit to feelings and attitudes that might be considered inappropriate or unprofessional. For example, most teachers would like to believe that they like all their students equally, but this is almost never the case. You will have some students you find charming and others who rub you the wrong way. The important thing is that teachers treat students fairly, which usually means treating them differently. Each child has different needs, and the best way to address these needs equitably is to address them

treat students fairly


PEANUTS
WHY SHOULD I LOOK? I KNOW WHAT I GOT..
HEY, HOW ABOUT THAT?
I GOT AN "F" ON THE TEST, FRANKLIN...WHAT DID YOU GET?
I GOT A "B"! I'M VERY HAPPY...
I THINK I GOT AN "F" BECAUSE I HAVE A BIG NOSE...SOMETIMES A TEACHER JUST DOESN'T LIKE THE WAY A KID LOOKS...
IF A TEACHER DOESN'T LIKE YOUR LOOKS, THERE'S NOTHING YOU CAN DO..
I'VE GOT A BIG NOSE, SO I FAIL...IT'S AS SIMPLE AS THAT...
LET ME SEE YOUR TEST PAPER..
THIS PAPER IS BLANK! YOU TURNED IN A BLANK TEST PAPER...
IF A TEACHER DOESN'T LIKE YOUR LOOKS, FRANKLIN, THERE'S NOTHING YOU CAN DO..
SCHULZ

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uniquely, including taking into account such factors as race, ethnicity, and gender. As one educator puts it, "If teachers pretend not to see students' racial and ethnic differences, they really do not see the students at all and are limited in their ability to meet their educational needs."[3]

cultivating positive attitudes

Teacher Expectations In general, a teacher's expectation that *all* students can succeed seems to make a difference in students' achievement. As a teacher, you need to believe that all your students are capable of high academic achievement and base your beliefs and behavior on the needs, abilities, and aspirations of each individual student.

Teachers do form expectations about a student's performance, and these expectations seem to relate to the student's achievement. The source of a teacher's expectations may vary: a student's social class, race, or sex; information from previous teachers; test scores; or family background information. Research indicates

stereotypes

that some teachers expect certain behaviors from students on the basis of stereotypes that they have about particular racial, ethnic, or socioeconomic groups.[4] For example, Asian American students may be encouraged to study mathematics or science because teachers believe they are "good" in those subjects. Or teachers may expect more from middle-class students than from lower-class students. Often teachers do not recognize these attitudes and beliefs but communicate them nevertheless in both overt and subtle ways, including the use of praise or criticism to guide a student's performance.[5]

self-fulfilling prophecies

If a teacher expects a student or group of students to behave in a certain way, the teacher's attitude may serve as a **self-fulfilling prophecy:** that is, the students may behave in the predicted manner in response to the teacher's attitude and not as a result of the other factors on which the teacher's expectations are based. Thomas Good and Jere Brophy have suggested a process by which teachers' expectations may encourage certain levels of achievement.[6]

First, the teacher forms expectations of specific behavior and achievement for individual students. Then the teacher's behavior toward these students differs according to the expectations. The students perceive the teacher's expectations

from how they are treated; this perception affects their self-concept, motivation to achieve, and aspiration to excel. Over time, students of whom much is expected will perform well, and students of whom little is expected will perform poorly. Thus, the result seems to justify the original expectation and fulfill the teacher's unspoken prophecy. The process is not automatic; teachers' expectations are not always fulfilled. But research indicates that teachers can influence which children do or do not achieve in the classroom.

Carl Rogers's Views At this point, let us consider the position—most eloquently expressed by Carl Rogers, a noted counselor, psychologist, and therapist—that significant learning depends on certain "attitudinal qualities" in the personal relationships between the facilitator and the learners.[7] Rogers used the term *facilitator* rather than *teacher* because he believed that it emphasizes what happens to the learners rather than the performance of the teacher. The term *facilitator* also implies significantly different functions than does the term *teacher.*

teacher as facilitator

According to Rogers, an effective facilitator possesses the following three attitudinal qualities:

three important attitudes

1. *Realness* or genuineness. This is the attitude most basic to the learning relationship. The facilitator must be a real person, one who "is *being* himself" and who is free to be enthusiastic, bored, interested, or angry instead of presenting a front or playing a role.

2. *Valuing* the learners. To develop effective relationships, the facilitator must respect the learners—their feelings, their opinions, and their persons—as worthy in their own right, accepting both their imperfections and their potentialities.

3. *Empathic understanding.* This is the ability to understand the learner without judging or evaluating. Recall the student who said to Carol Landis, "This library stinks. Why do we have to do this assignment anyway?" An empathic, nonevaluative response by Carol might be "You don't care for the library, and you don't understand why you have to do the assignment. What do you find the most troublesome about the assignment?" Rogers urged that a teacher initially set the goal of making one nonevaluative, accepting, empathic response per day to a student's demonstrated or verbalized feelings. By doing so, he believed, the teacher will discover the potency of this approach.

Rogers's approach is intended to create a classroom environment conducive to self-initiated learning. He maintained that the teacher's skills, knowledge of the field, curricular planning, lectures, and selection of books and other learning aids are all peripheral; the crux of the learning situation is the relationship between the facilitator and the learner, which should be characterized by *realness, valuing,* and *empathy.* In the absence of these three attitudinal predispositions, Rogers contended, the learning environment is sterile and cannot produce significant learning.

facilitator-learner relationship

There is little question that if you have empathy for your students, value them as unique individuals, and are secure enough to be yourself without playing a

How Do Teachers Treat Low Achievers?

Researchers have not definitely established why some teachers treat students they perceive as high and low achievers differently. But observations of many classroom teachers reveal that they often behave differently toward these two groups of students. Good and Brophy have summarized these differences:

1. Teachers wait less time for lows to answer a question.
2. Teachers give lows answers or call on someone else for the answer instead of giving clues or providing additional opportunities to respond.
3. Teachers reward lows for inappropriate behaviors or incorrect answers.
4. Lows are more often criticized for failure.
5. Lows are praised less frequently for success than highs.
6. Lows may not receive feedback for public responses.
7. Generally, teachers interact less often with lows, paying less attention to them.
8. Teachers call on lows less often for answers to questions.
9. Teachers seat lows farther from the teacher.
10. Less is demanded from lows.
11. Lows receive more private than public interactions; their activities are more closely monitored and structured.
12. When teachers grade tests and assignments, they give highs but not lows the benefit of the doubt in borderline cases.
13. Lows experience fewer friendly interactions, including fewer smiles and other nonverbal signs of support.
14. Lows receive shorter and less informative feedback to their questions.
15. Teachers make less eye contact and respond less attentively to lows.
16. Teachers make less use of effective but time-consuming instructional methods with lows when time is limited.
17. There is less acceptance and use of lows' ideas.
18. Lows are exposed to an impoverished curriculum.

Source: "How Do Teachers Treat High or Low Achievers?" from *Looking in Classrooms*, 8th ed. by Thomas L. Good and Jere E. Brophy. Copyright © 2000 by Addison-Wesley Educational Publishers, Inc. Reprinted by permission.

role, you will be a more successful teacher. In addition, the atmosphere in your classroom will make possible for you and your students a joy, an excitement, and a closeness absent from many classrooms.

The Teacher's Attitude Toward Peers and Parents

Much of what we have already said about teachers' attitudes toward themselves and toward children also applies to their attitudes toward peers and parents. Some attitudes enhance a teacher's effectiveness, and others detract from it.

problems with authority

Authority/Collaboration One source of conflict may be the teacher's attitude toward those who represent authority (ordinarily administrators but, for prospective teachers, the university supervisor or cooperating teacher). Teachers

may find it hard to be themselves while dealing with people who outrank them in position or prestige. Sometimes teachers find they yield too readily to demands from those in authority, and as a result they feel guilty about complying rather than standing on their own convictions. When this occurs, the result is often a continuing undercurrent of resentment toward the person in authority.

If teachers can assume a role of collaboration with those in authority, seeing themselves as part of a valuable partnership in the enterprise of education, they may be able to overcome any predispositions to hostility or any anxiety unwarranted by reality. Resentment of those in authority only prevents communication and understanding.

Competition/Cooperation Some teachers develop a strong drive to compete with other teachers for recognition from both authority figures and students. They try to have the best lesson plans, to be the "most popular teacher," or to maintain the friendliest relationship with the administration. Such teachers are striving to be recognized and rewarded. As a result of this attitude, they sometimes cut themselves off from much-needed help and severely limit their ability to be of help to others. Carol Landis has taken an important first step by enlisting the help of other teachers to get the necessary resources for her students. For the benefit of staff and students, teachers need to cooperate and share ideas.

need for recognition

Superiority and Prejudice/Acceptance One attitude that never fails to cause trouble for teachers is a feeling of superiority to other teachers or parents of students. They may feel intellectually superior to colleagues, socially superior to students' parents, or both. Some teachers simply have little tolerance for people who differ from them in values, cultural background, or economic status, and, as a result, they treat others with disdain and contempt rather than patience and respect. Again, effective teachers—those who work well with colleagues and parents to empower children to achieve—show attitudes of acceptance. In their dealings with other teachers and parents, teachers can again benefit from Carl Rogers's advice: be real or genuine, value other people as worthy in their own right, and show empathy.

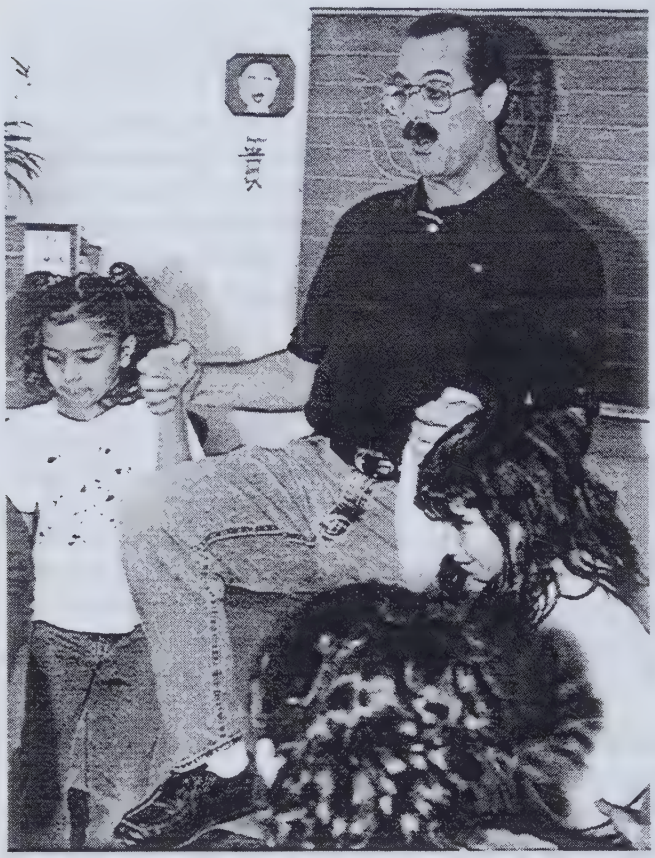
lack of tolerance

The Teacher's Attitude Toward the Subject Matter

This section is short because our message is simple: it is most important that whatever subject matter you teach, you feel *enthusiasm* for it. Just as students usually can discern the teacher's attitude toward them, they are also very sensitive to the teacher's attitude toward the subject matter. One of the most striking characteristics of the excellent teacher is enthusiasm for what she or he is teaching, or facilitating. The bored teacher conveys boredom to the students—and who can blame them for failing to get excited if the teacher, who knows more about the subject than they do, doesn't find it engaging?

must feel enthusiasm

Some teachers find it difficult to feel enthusiasm for a curriculum they haven't constructed themselves, or don't identify with, or don't want to teach. The surest way to guarantee that teachers are enthusiastic about what they are teaching is to allow them to teach what they are enthusiastic about. And we do not mean this



Teacher enthusiasm is usually contagious. (© Bob Daemmrich)

as a mere play on words. We would rather see an enthusiastic teacher teaching a minor historical topic or macramé than an uninspired teacher teaching Shakespeare. As one student put it, "There is nothing worse than sitting in a lesson knowing full well that the teacher is dying to get rid of you and rush back to the staff room to have a cup of coffee." Unfortunately, as more and more states adopt learning standards for students, the latitude that teachers once had to choose content is being greatly curtailed. States expect teachers to teach to the standards, and the high-stakes assessment tests given to students exert considerable pressure on teachers to be certain they "cover the content" contained on the assessments. If you have to teach something you would rather not, try to develop a positive attitude toward the subject. Enthusiasm: if the teacher has it, life in the classroom can be exciting; if it is missing, there is little hope that students will learn much of significance.

I touch the future. I teach.

—CHRISTA MCAULIFFE

What Subject-Matter Knowledge Does the Effective Teacher Need?

Very simply, prospective teachers need to understand the content of the subjects they teach, as well as the methods of teaching the specific content. The content is

learned by studying subject-matter courses taken in college and studying the actual curriculum taught in the schools. Teachers need to understand the subjects they teach well enough to analyze and convey their elements, logic, possible uses, and social biases. That is, teachers need to understand the structure of the subjects they teach.

structure of the discipline

Unfortunately, most college courses in the specific disciplines don't prepare prospective teachers to actually teach the knowledge that students are expected to learn. Much of what prospective teachers learn from their study of the academic disciplines is not taught to children and so is not directly applicable to teaching. This is particularly true for elementary school teachers, who are called on to teach content that is rarely taught in universities. For example, a mathematics major preparing to teach elementary school may never have occasion to use differential equations or calculus in the content she or he teaches to elementary-age children. Thus, although studying and understanding specific disciplines is crucial, it is not sufficient for effective teaching. The teacher must also understand the content of the school curriculum that pupils are expected to know.

curriculum content

Another type of knowledge shown by effective teachers is **pedagogical content knowledge,** the knowledge that bridges content knowledge and pedagogy. Pedagogical content knowledge represents the "blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction."[8] The skilled teacher draws on the most powerful analogies, illustrations, examples, explanations, and demonstrations to represent and transform the subject so that students can understand it. For example, a physics teacher who possesses pedagogical content knowledge might use the analogy of water flowing through a pipe to explain how electricity flows through a circuit, but he or she would also know the limitations of such an analogy. Education methods courses in the specific subject areas are where you are most likely to learn pedagogical content knowledge.

pedagogical content knowledge

These three types of knowledge—of discipline content (including the structure of the discipline), of curriculum content, and of pedagogical content—are, we believe, essential for effective teachers. Did Carol Landis have such knowledge? We suspect not, at least not to the degree that she could communicate information and concepts to her class with the authority and expertise required for effective teaching. In the next section, we'll examine more closely another area of the effective teacher's knowledge: theoretical knowledge about learning and human behavior.

all three types of knowledge essential

What Theoretical Knowledge Does the Effective Teacher Need?

Theoretical knowledge about learning and human behavior equips the teacher to draw on concepts from psychology, anthropology, sociology, and related disciplines to interpret the complex reality of the classroom. The teacher who

lacks a theoretical background will have to interpret classroom events according to commonly held beliefs or common sense, much of which is, unfortunately, based on outmoded notions of human behavior.

Theories-in-Use

Let's return for a moment to the case of Carol Landis. In the incident described, Carol operated on the basis of certain ideas, or what some call *theories-in-use,* which differ from pure theories.[9] A *theory* is an unproved explanation of why something happens the way it does. In its simplest form, a theory is a hypothesis designed to bring generalizable facts, concepts, or scientific laws into systematic connection. On the other hand, a *theory-in-use* is something people have in their heads and apply in their dealings with people and the world. Theories-in-use are often unexamined.

typical theories-in-use

We all have these theories-in-use, and they guide us as we make our way through our daily lives. You eat certain foods because you have an idea that they have a healthy effect on the body. Or you decide to take a summer job in a public playground, believing that you'll get to know children better and that future prospective employers might be pleased or impressed when they hear you've had that kind of experience.

Carol's theories-in-use

As you may have observed, Carol Landis has several theories-in-use. For example, Carol has the theory-in-use that groups should operate democratically and not be dominated by one student. She also has a theory-in-use that some children will perform better in school than others; as a result, she expects certain behavior from certain kinds of students. She also has a classroom management theory-in-use that she should give students some leeway before she resorts to firm discipline. Some of Carol's theories-in-use are clearly questionable. A few may have contributed to her problems that day in the library, and some may cause her more problems further down the line. But notice that Carol was not worried about her theories-in-use. She was worried about what she did and what she will do. She didn't question some of her conceptions. Theories-in-use were the last things she had in mind, but they in fact caused some of her problems.

Why Study Educational Theory?

The fact that Carol did not reflect on the truth or falsity of her theories-in-use or try to recall some theories she had learned during her teacher education is not uncommon. Indeed, many teachers question the basic usefulness of theory. Many a beginning teacher has been told by a senior colleague, "Forget all that theory they've been giving you in college. Here's what works in the real world." Further, preservice teachers often complain that courses are too theoretical. They want to get out to schools, where the action is. This desire (perhaps it is your own desire) for things that work and ways to cope with real situations is vital, and we do not want to diminish it. As a teacher, you will need practical techniques and solutions to real problems. But to need practical tools does not mean that educational theory is less important.

Raising Standards for Teachers

What's the Policy?

Along with the push to raise academic standards for students in elementary and secondary schools, most states are raising the standards expected of would-be teachers.

How Does It Affect Teachers?

States are now requiring higher grade point averages for students entering teacher education programs. Also, as a prospective teacher, you will most likely have to pass some form of standardized test to become licensed to teach in your state. Candidates for teaching licenses usually must achieve passing scores on examinations that test general literacy and mathematical knowledge, subject-matter knowledge, and professional teaching knowledge.

What Are the Pros?

Teachers are increasingly seen as the missing element in the drive to raise academic standards and increase public confidence in K–12 schools. The perception is that you can raise standards for children and youth, but if you don't have good teachers, you won't make progress.

What Are the Cons?

Higher standards could contribute to a teacher shortage. States are increasing the standards for becoming a teacher just as the demand for teachers is increasing, and many are predicting a shortage of teachers over the next decade. Nationwide, 2.2 million new teachers will be needed in the next decade to meet rising student enrollments and replace retiring teachers. Passing state tests is not always automatic. For example, in the spring of 1998, Massachusetts introduced its first-ever licensure exam, and nearly 60 percent of the test takers flunked. The bar for becoming a teacher has been raised, with the predictable result that fewer people will get over it.

The increasing standards may also discourage people from pursuing teaching as a career for fear that they will spend four or five years of teacher education, only to be denied the opportunity to teach because they failed an exam. There is also concern that the exams don't really measure teaching effectiveness, merely general knowledge. Also, some people who would be fine teachers just don't test well. Finally, many people are concerned that these tests will diminish the pool of minority candidates, who historically have not tested as well as white candidates.

What Do You Think?

1. Is your decision on whether or not to become a teacher influenced at all by the requirement to pass a test to become licensed? Why or why not?
2. Professions such as law and medicine require tests for licensure. Do you support the idea of testing teachers for licensure? What concerns, if any, do you have about teacher competency tests?
3. What alternative methods can you suggest for states to use to determine teacher competence?

why theoretical knowledge is necessary

The case of Carol Landis illustrates how lack of theoretical knowledge of classroom management can lead to inappropriate behavior on the teacher's part. Both theory and empirical research support the notion of being consistent in your expectations of student behavior, whereas Carol thought it was all right to let students behave as they wished until they crossed her tolerance threshold, at which point she came down hard on them. Carol probably would not have encountered such trouble if more of her theories-in-use had been challenged.

good theories are practical

Like Carol, you may have your own theories-in-use, and these need to be challenged and tested. The best way to do this is to pit them against other theories and ideas. We believe, moreover, that theoretical information *is* practical. The problem is not that theory is wrong or unworkable but that many teacher education programs offer students few opportunities to apply theory to practical situations. As the great American educator John Dewey said, "Nothing is so practical as a good theory."* Finally, by giving attention to theoretical knowledge now, we are looking ahead to the future. In other words, even if it doesn't interest you much at this point, we want you to know that at a later stage of your development, you will encounter theories that will enlighten and enrich your work with the young.

How Can Theoretical Knowledge Be Used?

A teacher's theoretical knowledge can be used in two ways: to interpret situations and to solve problems. (Practical knowledge, on the other hand, is more limited in applicability and is used primarily to respond to familiar situations.)[10]

An Example of Using Theoretical Knowledge Let's consider an example of how theoretical knowledge can help a teacher interpret classroom events and solve the problems arising from them. In educational psychology, there is a concept known as the **zone of proximal development,** a range of tasks that a child cannot yet do alone but can accomplish when assisted by a more skilled partner. In other words, the child is on the verge of being able to solve a problem, but just needs some structure, clues, help with remembering certain steps or procedures, or encouragement to try. (This assistance, called **scaffolding,** allows students to complete tasks they can't complete independently.) This zone is where instruction can succeed and real learning is possible. The concept of the zone of proximal development derives from the theoretical work of the Russian psychologist Lev Vygotsky, in which he theorized that a child's culture shapes cognitive development by determining what and how the child will learn about the world.

zone of proximal development

Education must bring the practice as nearly as possible to the theory.

—HORACE MANN

Now suppose that a student, John, is experiencing difficulty doing some percentage problems in math. You, the teacher, understand that the zone of proximal development is influenced by reasoning ability, background knowledge, and motivation. Therefore, you assess John's ability to understand the problems by

*For the moment we will downplay the fact that John Dewey was primarily an educational theorist.

Teaching: Art or Science?

One of the pioneering investigators of research on teaching, N. L. Gage, professor emeritus at Stanford University, sees teaching as a blend of both art and science. Teaching can be considered an art because teachers must improvise and spontaneously handle a tremendous number of factors that interact in often unpredictable and nonsystematic ways in classroom settings. Teaching cannot be reduced to formulas or recipes for action, in Gage's opinion.

On the other hand, Gage contends that teaching is also a science. Although science can't offer absolute guidance for teachers as they plan and implement instructional strategies, research can provide a scientific basis for the art of teaching. For example, the research on academic engaged time has demonstrated the importance of keeping pupils on task with intellectually challenging, but not too difficult, subject matter.

These two components of teaching, art and science, interact. Empirically derived knowledge of the relationships among teacher behavior, pupil behavior, material to be learned, and desired student learning can guide teachers as they make artistic decisions about their teaching. That is, teachers use their knowledge of the research on these relationships to accomplish the artistry of moving a unique classroom of unique students toward the intended learning.

Is teaching an art or a science? The answer is "yes."

Source: N. L. Gage, *Hard Gains in the Soft Sciences: The Case of Pedagogy* (Bloomington, IN: Phi Delta Kappa, 1985), pp. 4–11. Copyright © 1985.

watching him try to solve one of them. You ask him to explain to you what he is thinking as he attempts the solutions. Is he missing some important understanding, or is he making some procedural error? Are the problems too difficult, or should he be able to solve them with some assistance? If the latter, what kind of assistance does he need? Who should give him the assistance, you or another student?

forming hypotheses and investigating

You decide that John is not lacking any fundamental knowledge but is very close to understanding the correct procedures. You ask Mary, a student who understands percentage problems pretty well, to come over and think aloud as she works on one of the problems. By thinking aloud and having John follow along, Mary provides John with insight into how she goes about solving the problem. You encourage John to ask Mary questions as she goes over her solution. You now ask John to work a similar problem, also thinking aloud as he tries to solve it. This time he gets the problem correct. You ask him to do a couple more problems and to raise his hand when he finishes so you can check to see if his understanding carried over to the new problems.

using theoretical knowledge

How did the theoretical knowledge about the zone of proximal development assist you in helping John? First, you had to determine whether John was close to understanding or missing some fundamental knowledge. Was he in the zone of proximal development where additional coaching or assistance would help him, or would you have to reteach some important knowledge that he didn't have? Second, what sort of scaffolding would benefit John? By having both Mary and John think aloud as they solved the problem, mistakes or errors could be easily

determined and, if solved correctly, provide a model for John. An understanding of the zone of proximal development and its related scaffolding strategies represents the kind of theoretical knowledge that can help you interpret and solve classroom problems.

This example helps to show that a teacher needs much more than a commonsense understanding of human behavior. The capable and effective teacher uses theoretical knowledge drawn from various education-related disciplines to formulate and test hypotheses about human behavior in the classroom. In our opinion, the translation of theory into practice cannot be left to chance; you must constantly take advantage of opportunities that allow you to apply theoretical concepts to classroom situations and to receive guidance and feedback from your instructors about the application of these concepts. The field of cognitive psychology, in particular, has recently provided fertile research findings and theoretical concepts for teachers.

taking advantage of opportunities

What Teaching Skills Are Required of an Effective Teacher?

Knowing Versus Doing

Simply knowing something does not guarantee the ability to act on that knowledge. There is a profound difference between *knowing* and *doing*. Teachers may know, for example, that they should provide prompt feedback to their students on written assignments, but they are not always able to act on that knowledge. Or teachers may know how important it is to hold high expectations for all children, regardless of race, ethnicity, or social class, but not act on that knowledge. No teacher education program can afford to focus only on theoretical knowledge at the expense of the practice, or "doing," dimension of teaching, just as no individual teacher can rely solely on knowledge of subject matter. All prospective teachers need to develop a repertoire of *teaching skills* to use as they see fit in varying classroom situations.

A master can tell you what he expects of you. A teacher, though, awakens your own expectations.

—Patricia Neal (Actress)

some essential skills

Among the skills that many educators believe are essential to effective teaching are the following:

- The ability to ask different kinds of questions, each requiring different types of thought processes from the student
- The ability to plan instruction and learning activities
- The ability to diagnose student needs and learning difficulties
- The ability to vary the learning situation to keep the students involved
- The ability to recognize when students are paying attention and to use this information to vary behavior and, possibly, the direction of the lesson

What Are Some Characteristic Behaviors of Effective Teachers?

In a broad study, educational researcher David Berliner attempted to provide an answer, based on contemporary research on teaching, to the question "What is an effective teacher?" His answer focuses on teacher behaviors that give students the opportunity to spend sufficient time engaged in and succeeding at tasks that help them achieve intended learning. Several behaviors seem to distinguish effective teachers:

- They monitor students' independent work, checking on their progress and providing appropriate feedback, to maintain a high level of student engagement with the task at hand.
- They structure lessons to let students know what is expected of them and what procedures to follow.
- They pace instruction rapidly to deliver a maximum amount of the curriculum to students.
- They ask questions requiring students to analyze, synthesize, or evaluate, demand answers at the same level as the question, and wait at least three seconds for students' answers.
- They communicate high expectations for student success.
- They provide a safe and orderly classroom. Deviant behavior is managed sensibly, and academic achievement is rewarded.
- They foster a convivial atmosphere in their classrooms.
- They capitalize on the instructional and motivational uses of tests and grades.
- They provide feedback to students through praise, the use of student ideas, and corrective forms that allow students to respond appropriately.

This list is not comprehensive; these nine categories of teaching behaviors are only examples of behaviors that distinguish effective teaching. But the relationship of this collection of attitudes, knowledge, and skills to a research base indicates their importance in the repertoire of the professional teacher.

Source: David C. Berliner, "Effective Classroom Teaching: The Necessary But Not Sufficient Condition for Developing Exemplary Schools," in *Research on Exemplary Schools,* ed. Gilbert R. Austin and Herbert Garber (Orlando, FL: Academic Press, 1985), pp. 127–154. Copyright © 1985.

- The ability to use technological equipment, such as computers, to enhance student learning
- The ability to assess student learning
- The ability to relate learning to the student's experience

The list of skills just given is far from complete. It does make it clear, however, that teachers need a large repertoire of skills to work effectively with students with varying backgrounds and different educational experiences. Varied approaches are necessary to meet the many needs of students. Such skills must be overlearned to the point of becoming automatic; otherwise teachers will have difficulty calling up these skills in the classroom's complex and rapidly paced setting. As Figure 4.1 illustrated, effective use of teaching skills, along with appropriate attitudes, knowledge of subject matter, and theoretical knowledge, leads to better instructional decision making.

importance of overlearning

Classroom Management Skills

No other dimension of teaching causes more concern for beginning teachers than managing the classroom and maintaining discipline. "Will I be able to manage and control my class(es) so I can teach effectively?" is a question most beginning teachers ask themselves. Because there is such a great concern about this aspect of teaching, we have chosen to spend some time on this skill area first, before turning, somewhat more briefly, to two others: questioning and planning skills.

definition of classroom management

Classroom management is "a process—a set of activities—by which the teacher establishes and maintains those classroom conditions that facilitate effective and efficient instruction."[11] Developing teacher-student rapport, establishing productive group norms, and rewarding promptness are examples of managerial behavior. Managerial behavior also includes housekeeping duties like recordkeeping and managing time and resources in the classroom.

As with most complex teaching skills, classroom management requires a thorough understanding of theoretical knowledge and research findings, as well as practical experience. The knowledge or theory comes primarily from educational, social, and humanistic psychology. As with many other areas of investigation, there is no consensus regarding the one most effective approach to classroom management. Instead there are different philosophies, theories, and research findings, each tending to address particular dimensions or approaches to classroom management. Table 4.1 gives a brief overview of some of these approaches.

no one approach

The last twenty-five years or so have produced significant new knowledge about effective classroom management practices. The following sections describe some of those findings.

Academic Engaged Time Research that focuses on student behaviors—primarily academic engaged time—reveals some interesting insights on effective teaching skills.* **Academic engaged time** (also known as *academic learning time*) is the time a student spends being successfully engaged with academically relevant activities or materials. Several research studies indicate that academic engaged time in reading or mathematics is strongly related to achievement in those subjects.[12] Simply put, the more time elementary students spend working on reading or mathematics activities that provide them with successful experiences, the more likely they are to achieve in those areas. Although this finding may not seem very startling, observations indicate that tremendous differences exist in the amount of time individual students spend engaged in academic activities, both across classrooms and within the same classroom.

research findings

*On-task behavior, time on task, and academic engaged time are related concepts. *On-task behavior* is student activity that is appropriate to the teacher's goals. *Time on task* refers to the amount of time students spend engaged in on-task behavior. *Academic engaged time*, discussed here and in Chapter 3, adds the dimensions of a high success rate and academically relevant activities or materials to the concept of time on task.

TABLE 4.1 Different Approaches to Classroom Management

Name	Major Developers	Characteristics
Behavior modification	B. F. Skinner	Originates from behavioral psychology. Modify student behavior by consistently and systematically rewarding (reinforcing) appropriate student behavior and removing rewards for, or punishing, inappropriate student behavior.
Socioemotional climate	Carl Rogers William Glasser Haim Ginott	Originates in counseling and clinical psychology. Emphasis on building positive interpersonal relationships between students and teachers.
Group process	Richard Schmuck and Patricia Schmuck Lois Johnson and Mary Bany	Originates in social psychology and group dynamics research. Emphasis on teacher establishing and maintaining effective, productive classroom group. Unity and cooperation, as well as group problem solving, are key elements.
Authority	Lee Canter and Marlene Canter	Views classroom management as a process of controlling student behavior, primarily by using discipline. Emphasizes establishing and enforcing rules, using soft reprimands and orders to desist. *Assertive discipline* is a popular manifestation of this approach.

Source: Wilford A. Weber, "Classroom Management," in *Classroom Teaching Skills*, Sixth Edition by James M. Cooper (ed.). Copyright © 1999 by Houghton Mifflin Company. Reprinted by permission.

The research on academic engaged time clearly indicates that a primary goal of elementary teachers (and probably secondary teachers, although the research has been limited mostly to elementary schools) should be to keep students on task. We know that classes that are poorly managed usually have little academic learning time. A major task of teachers is to learn how to manage their classes so that students are productively engaged.

differences among teachers

Numerous studies indicate that the most efficient teachers are able to engage their students about thirty minutes a day longer than the "average" teacher. If the most efficient teachers are compared with the least efficient, daily differences of an hour in academic engaged time appear. If this is spread out over 180 days, students of efficient teachers get 90 hours more of academic engaged time than

students of average teachers and 180 hours more than students of inefficient teachers! Differences of this magnitude may help explain why students in some classes learn more than students in others.

Kounin's Research Jacob Kounin's research on classroom management in the elementary school grades explains which skills can help teachers improve their classroom management and keep pupils on task.[13] Kounin discovered that effective managers kept students involved in academic tasks, minimized the frequency with which students became disruptive, and resolved minor disruptions before they escalated into major ones. Of the concepts Kounin identified to describe teacher classroom management behavior, three seem particularly useful. The first concept he termed *withitness.* Teachers who are "with it" are those who communicate to pupils, by their behavior, that they know what is going on. Teachers who are "with it" pick up the first sign of misbehavior, will deal with the proper pupil, will ignore a minor misbehavior to stop a major infraction, and so forth.

"withitness"

The second and third concepts concern the problems of lesson flow and time management. *Smoothness* involves the absence of behaviors initiated by teachers that interfere with the flow of academic events. Examples of teacher behavior that do not reflect smoothness occur when a teacher bursts in on children's activities with an order, statement, or question; when a teacher starts, or is engaged in, some activity and then leaves it "hanging," only to resume it after an interval; and when a teacher terminates one activity, starts another, and then initiates a return to the terminated activity.

smoothness

The third concept, *momentum,* concerns the absence of teacher behaviors that slow down the pace of the lesson. Kounin conceptualized two types of slowdown behaviors: *overdwelling* (when a teacher dwells too much on pupil behavior, on a subpoint rather than the main point, on physical props rather than substance, or on instructions or details to the point of boredom) and *fragmentation* (when a teacher deals with individual pupils one at a time rather than with the group or unnecessarily breaks a task into smaller parts when the task could have been accomplished in a single step).

momentum

Kounin found strong correlations between teachers' use of withitness, smoothness, and momentum and their pupils' work involvement and restraint from misbehavior. He discovered that teachers who are effective classroom managers emphasize the prevention of disruptions rather than having to deal with them after they occur. Good managers do this by keeping the students engaged in lessons and assignments through effective application of the skills related to withitness, smoothness, and momentum.

Other Research Findings Many researchers have replicated and extended Kounin's work on classroom management. Here are a few other important recommendations arising from the research:

important recommendations

1. *Establish clearly defined rules and routines.* Clear rules and routines decrease the complexity of the classroom, minimize confusion, and prevent loss of instructional time. Moreover, having students help make the rules increases their commitment to abide by them.

Kevin and Jim's Suggestions for Classroom Management Problems

1. *When students misbehave, check your instruction.* Many behavior problems result from problems with instruction. Students are bored or confused, and their response is to get off task and into trouble.
2. *Take the time to ensure that students fully understand your classroom's rules and procedures.* As the old adage has it, "You have to keep school before you can teach school." At the beginning of the year, and again if and when things begin to break down, teachers need to fix in the minds of their students how the class is to be ordered.
3. *Regularly monitor the entire class.* Successful classroom managers frequently scan the class, noticing what each student is doing. Although the teacher need not react to every sign of off-task behavior or deviation from the established procedure, it is important for students to know that what they are doing is being noted.
4. *Move in on repeated or flagrant breaches of conduct quickly and directly.* Do not let things drift. Students will think you are afraid to confront them, and they may end up confronting you!
5. *Correct in private.* As much as possible, deal with student misconduct in private. Don't disturb the rest of the students and get them off task simply to get one or two students back to work. Also, public reprimanding may backfire and get you involved in a game of escalating remarks with a student.
6. *Don't make empty threats.* Do not say you are going to "do" something to a student or the class unless you have thought it over carefully and are really ready to do it. For instance, do not threaten to call the parents of every child in the room and tell them what rotten children they have unless you have a good deal of time—and alternative plans for next year.
7. *Don't put a hand on a student in anger or even annoyance.* Do not even think of striking a student, no matter how much you are tempted. When a situation is emotionally charged, even your well-intended gesture can be misinterpreted. On the other hand, if students are fighting, you may need to restrain them physically for their own good.
8. *Think through behavior problems.* When your class or an individual student is not behaving up to your expectations, treat the event as a problem-solving activity. Do not flail around or get panicky or discouraged. Coolly identify exactly what the problem is, consider possible causes, and test some possible solutions.
9. *Get help.* If management problems persist and you cannot solve them on your own, get help from a colleague or an administrator. Do not let things fester. Do not be shy about asking for help, particularly about discipline problems, which are so common for many beginning teachers.
10. *Be sure there is a back-up system.* If you need to remove a student from your room, you need to know there is a system in place that will back you up.
11. *Be sure your rules accord with schoolwide expectations.* For example, if the school has decided that chewing gum is tolerable and you crack down on it, you can expect to have more trouble than the issue is probably worth.

2. *Ensure students' compliance with rules and demands.* To encourage students to comply willingly with the rules and routines, teachers must gain students' cooperation by establishing positive relationships, sharing responsibilities, and using rewards. In addition, teachers must be willing to administer consequences for repeated misconduct in a way that is not threatening or punitive.

3. *Involve families.* When families understand what the teacher is trying to achieve, they can provide valuable support and assistance, including helping to develop and carry out successful behavior management plans.

developing students' responsibility

One school of thought rejects the notion of effective classroom management as a system of rewards and punishments, because these are seen as instruments for controlling people. In this approach, instead of teachers seeing themselves as being in charge and taking steps to maintain that control, they should give up some of the control and help students work together to decide how to be respectful and fair; that is, teachers should help students develop an internal sense of how to work together in a community.[14] The approach may involve times of chaos and uncertainty, but advocates believe that students will learn ethics and democracy in action. One of your responsibilities as a teacher will be to develop a philosophy and a way of operating in the classroom that make sense to you and that accomplish what you value. Your attitude toward the use of rewards and punishments will be part of that development.

Overall, we are learning more about what constitutes effective classroom management behavior. Understanding the related theories and research and practicing the skills that this body of knowledge has identified as effective will help you establish and maintain the conditions that promote student learning. Effective classroom management is a skill that can be taught and learned.

Questioning Skills

ineffective questioning

The questioning process is a central feature of most classrooms. Studies indicate that teachers may ask hundreds of questions in a day's lessons, but they often fail to ask questions that require students to process and analyze information, and their questions require only a rote response of memorized facts. They also tend to rush students' responses, not giving them adequate time to provide varied and thoughtful answers. Some teachers do not direct as many questions to certain groups of students—minority students, girls, "slower" learners—and thus deprive them of the opportunity to interact actively in classroom learning.[15] Mastery of questioning skills contributes to students' learning and thus is important for effective teaching.

Wait-Time Good questioning behavior requires that the teacher provide students with sufficient time to think about and respond to questions. What do you think is the average amount of time a teacher waits for a student to respond to a question she or he has asked? Mary Budd Rowe, a science educator, determined in a series of studies that the teachers she observed waited less than one second

before calling on a student to respond. Furthermore, after calling on a student, they waited only about a second for the student to answer before calling on someone else, rephrasing the question, giving a clue, or answering it themselves! How can students think carefully or deeply when they have only one second to respond to a teacher's question?

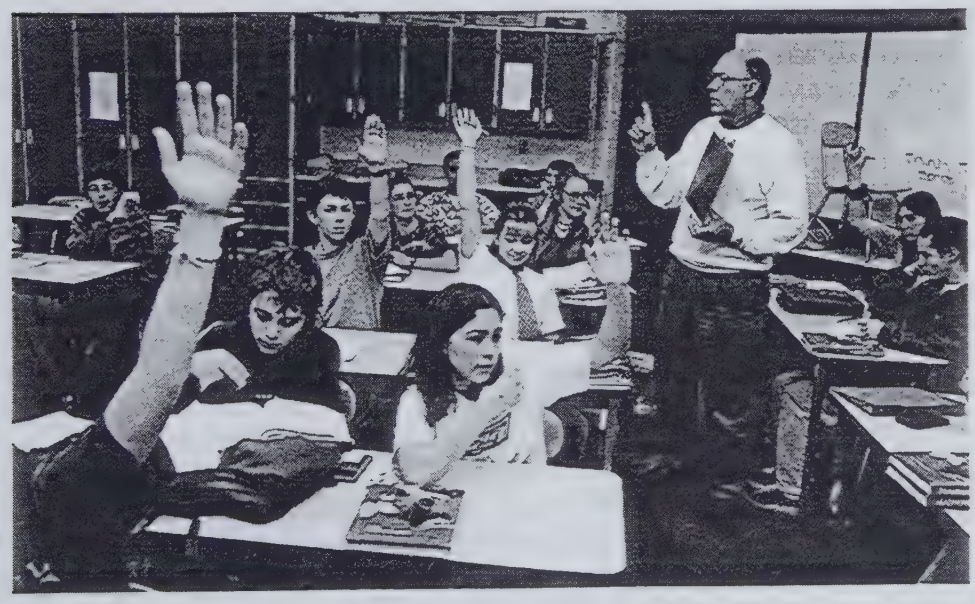
Rowe followed up these observations with studies designed to train teachers to increase their **wait-time** after questions from one second to three to five seconds. She reported amazing results, including the following: (1) an increase in the average length of student responses, (2) an increase in unsolicited but appropriate student responses, (3) an increase in student-initiated questions, (4) a decrease in failures to respond, (5) an increase in student-to-student interaction, and (6) an increase in speculative responses. In short, she found that longer wait-times led to more active participation on the part of more students and an increase in the quality of their participation. Subsequent research by others replicated her findings. If questions require students to think about material or generate original responses, they need a longer time to think about their answers than if they are being asked only to recall information from memory.[16]

results of wait-time training

Effective Questioning Techniques In addition to wait-time, those who have studied the relationship between questioning strategies and student achievement have identified a number of other techniques as signs of effective teaching. This research suggests that teachers do the following:

useful techniques

1. Phrase questions clearly. Avoid vague questions.
2. Ask questions that are purposeful in achieving the lesson's intent.
3. Ask brief questions, because long ones are often unclear.



Effective questioning strategies engage students in verbal discourse and promote genuine learning. (© Paul Conklin)

4. Ask questions that are thought provoking and demand original and evaluative thinking.
5. Encourage students to respond in some way to each question asked.
6. Distribute questions to a range of students, and balance responses from volunteering and nonvolunteering students.
7. Avoid asking "yes-no" and "leading" questions.
8. To stimulate thinking, probe students' responses or demand support for their answers.
9. Provide students with feedback about their responses, both to motivate them and to let them know how they are doing.[17]

With knowledge and practice, teachers can learn questioning strategies that engage all students in the verbal interaction that supports learning.

Planning Skills

Another skill related to a teacher's effectiveness is skill in planning. The plans teachers make for lessons influence the opportunity students have to learn, because plans determine the content students will experience in a lesson and the focus of the teaching processes. Effective teachers base their plans on a rich store of perceptions of classroom events and of their students' progress toward educational objectives. This store of perceptions—ways of looking at students and classroom activities—also helps the teacher make adjustments during instruction when plans must be adapted to the immediate situation.

types of planning

Teachers do four basic types of planning—yearly, unit, weekly, and daily—and all are important for effective instruction.[18] Research shows that experienced teachers don't plan the way curriculum experts recommend, that is, by beginning with instructional objectives and then selecting instructional activities to meet those objectives. Instead, many elementary school teachers begin by considering the context in which teaching will occur (for example, the materials and time available); then they think about activities that students will find interesting and that will involve them; finally, they ponder the purposes these activities will serve. Secondary school teachers, on the other hand, focus almost entirely on the content and preparation of an interesting presentation.[19] This doesn't mean experienced teachers don't have goals; rather, it suggests that the interest and involvement of their students are paramount. Since research shows that student achievement is related to academic engaged time, planning should include consideration of how to involve students.

Good teaching is one-fourth preparation and three-fourths theatre.

—GAIL GODWIN

We have looked at three skill areas—classroom management, questioning, and planning—that researchers have identified as competencies demonstrated by effective teachers. (Another important skill relates to the use of technology, to

which we devote the next chapter.) Principals and other school evaluators assess beginning teachers' competence in these as well as other skills areas as part of their observations of beginning teachers. Therefore, developing classroom management, questioning, and planning skills should be an important concern for those preparing to teach.

A Final Word

We think this chapter is an important one because it provides an overview of what a truly effective teacher needs to know and be able to do. It may have been a frustrating chapter if you concluded that there is no way you can achieve the ideal we describe. We share that frustration, since we ourselves have not attained this ideal in our own teaching, and we're not certain that we ever will. Nevertheless, we continue to aspire to be the type of teacher we have detailed in this chapter. If you too can fix your sights on this conceptualization of an effective teacher and continually work toward this ideal, you are certain to observe positive and rewarding results in your own classroom.

Although we can detail the various proficiencies teachers need, noted educational author Jonathan Kozol cuts to the chase in his description of what he would look for in a teacher:

> . . . obviously we want people who can teach [their subjects]. . . . But if I had to narrow it down to one characteristic, I would always hire teachers whom I wouldn't mind getting stuck with on a long plane flight to California. I would look for people who are capable of making the world seem joyful, people who are a delight to be with, people who are contagiously amusing human beings. To me, that's more important than almost anything else. I would put the emphasis on the capability to create contagious enthusiasm for life. There are a lot of teachers like that, but not enough."[20]

KEY TERMS

reflective teaching
scaffolding
participant observation
self-fulfilling prophecy
pedagogical content knowledge
wait-time
zone of proximal development)
classroom management
academic engaged time

FOR REFLECTION

1. Has reading about Carol Landis and her theories-in-use helped you identify

2. Do you have negative feelings or expectations about any group or type of people? Can you identify the basis of those feelings? Do you want to change them? If so, how might you try?

3. Do you agree that having an enthusiastic teacher teach an unimportant subject is preferable to an uninspired teacher teaching a crucial subject? What implications do you see in this remark? On what assumptions about teachers, students, and subject matter is it based?

4. Carl Rogers argues for a teacher who "is *being* himself" and shows feelings. Do you agree? Have you known any teachers who did so? Do you think children can cope with any reaction from the teacher as long as it is honestly expressed? Do you think this kind of teaching requires any particular prior training?

5. What is the difference between common sense and theoretical knowledge?

6. We have maintained that decision-making skills are important for teachers. What do you think you can do to improve your ability to make good decisions as you plan and deliver instruction?

7. Which of the skills listed on pages 199–200 seem most important to you? What skills would you add to the list? What skills would you subtract from it?

8. Do the research findings on academic engaged time surprise you? If you think the findings reflect common sense, why do you suppose teachers vary so much in their ability to keep students engaged?

9. We have included a number of suggestions for managing a classroom. Which seem most useful to you, and why? Which do you believe you would find most difficult to use, and why?

FOR FURTHER INFORMATION

Cooper, James M., ed. *Classroom Teaching Skills.* 6th ed. Boston: Houghton Mifflin, 1999.
This self-instructional book is designed to help teachers acquire basic teaching skills such as writing objectives, evaluation skills, classroom management skills, questioning skills, and interpersonal communication skills.

Danielson, Charlotte. *Enhancing Professional Practice: A Framework for Teaching.* Alexandria, VA: Association for Supervision and Curriculum Development, 1996.
This useful book, organized around a framework of professional practice, is based on the PRAXIS III criteria, including planning and preparation, classroom environment, instruction, and professional responsibilities.

Good, Thomas L., and Jere E. Brophy. *Looking in Classrooms.* 8th ed. New York: Longman, 2000.
This excellent book provides teachers with concrete skills that will enable them to observe and interpret the classroom behavior of both teacher and students.

Joyce, Bruce R., Marsha Weil, and Emily Calhoun. *Models of Teaching.* 6th ed. Boston: Allyn and Bacon, 2000.
This text describes numerous teaching models based on different assumptions about teaching and learning.

SEARCH **Teachers.Net. World Wide Web site at http://www.teachers.net/**
This excellent site has an online reference desk, an active chat board, and a lesson plan exchange.

Weinstein, Carol Simon, and Andrew J. Mignano, Jr. *Elementary Classroom Management: Lessons from Research and Practice.* 2d ed. New York: McGraw-Hill, 1997.
This practical book, based on sound research findings, addresses the major issues in establishing and maintaining effective learning environments. Ms. Weinstein has a secondary version entitled *Secondary Classroom Management* (1996), also published by McGraw-Hill.

PART THREE

Selections from Teaching, Leading, and Learning by Rita A. Jensen & Therese J. Kiley

5 Instructional Guidance: Moving Beyond Classroom Management

THIS CHAPTER

- Defines instructional guidance
- Identifies and describes teacher-centered and learner-centered approaches to instructional guidance
- Articulates five goals of instructional guidance
- Describes the relationship between organizational structures and instructional objectives
- Discusses student grouping arrangements appropriate for specific instructional objectives and activities
- Identifies and describes the contributions procedures, routines, rules, and consequences make to effective instructional guidance
- Uses guidelines to develop and evaluate rules and consequences
- Helps you synthesize your own philosophy of instructional guidance

— OR —

Control really is an illusion.

What Is Instructional Guidance?

Whether you call it instructional guidance, classroom management, or discipline, entire books have been written on the subject of this chapter. Here, our goal is to provide you with an overview of the subject and to prompt you to reflect on what you think about instructional guidance. Please remember that we can't tell you everything you'll ever need to know about instructional guidance in this book. Even if you were to read every book ever written on the subject, you still wouldn't learn everything you'll ever need to know about instructional guidance. And there certainly are lots of books on the subject (for example, see Arends, 1997; Canter & Canter, 1993; Curwin & Mendler, 1988; Edwards, 1997; Emmer, Evertson, Clements, & Worsham, 1994; Faber, Maxlish, Nyberg, & Templeton, 1995; Hoover & Kindsvatter, 1997; Jones & Jones, 1995; Levin & Nolan, 1996).

Instructional guidance (more commonly referred to as classroom management or discipline) typically tops the list of issues that most concern new teachers. Even many experienced teachers continue to struggle with instructional guidance. For example, upon returning to teaching after a number of years in private business, a high school teacher reflected, "When I first started teaching, my biggest worry was about kids chewing gum. Now I worry about kids carrying guns." Because schools tend to mirror the violence of society, teaching is not without its occupational hazards. Some teachers long for the days when they worried more about stapling their thumbs than they do about the need to park in well-lit, heavily traveled areas.

"Let the wise listen and add to their learning, and let the discerning get guidance."

—Proverbs 1:5

Visualize yourself as a first-year teacher on your first day of teaching. How do you feel? Can you feel anything at all, or are you just numb with fear? Make a mental list of your fears and concerns (*"What if . . . "*). Which items on your "what-if" list give you the most distress, the most nervous perspiration, the severest heart palpitations? For many first-year teachers, "losing control" of their students and classrooms appears somewhere on their list of "what-ifs."

In your teaching journal, describe the scene the words "losing control" bring to mind for you. Then describe what you think most teachers mean and want when they talk about being in control. Finally, using best practice principles, explain how you could avoid the scene you've described and achieve the conditions teachers describe as being in control.

Guidance Versus Discipline

When teachers are insecure and lack confidence in their abilities, they tend to rely on teacher-centered approaches to instructional guidance that provide them with the illusion of control. However, there are many different ways to approach guidance. Before we consider some of the many different approaches, we begin by defining instructional guidance and differentiating it from discipline.

Discipline often implies punishment—such as standing in a corner—for inappropriate behavior. **Instructional guidance,** by contrast, reveals the teacher's belief in the positive potential of learners. Teachers who engage in instructional guidance think beyond conventional classroom discipline, which focuses on controlling learners or keeping them in line. Instructional guidance requires a positive learning environment that is developmentally appropriate and culturally responsive. It teaches learners the life skills they need as citizens of a democracy: "respecting others and one's self, working together in groups, solving problems using words, expressing strong emotions in acceptable ways, making decisions ethically and intelligently. Teachers who use guidance realize that it takes well into adulthood to master these skills and that, in learning them, children—like all of us—make mistakes. Therefore, because children are just beginning this personal development, teachers regard behaviors traditionally considered *mis*behaviors as *mistaken* behaviors" (Gartrell, 1997, p. 35).

Instructional guidance is not just reacting to problems or another term for permissive discipline. And it is not reducible to a commercial program. Guidance does not mean that chaos and permissiveness usurp structure, expectations, and organization. To the contrary, high expectations, structure, and

organization are essential to, and compatible with, systems of responsive guidance.

Using instructional guidance means helping students learn from their mistakes rather than punishing them for their mistakes, empowering learners to solve problems rather than punishing them for having problems they can't solve, and helping learners accept consequences—but consequences that leave their self-esteem intact. "Guidance teaching is character education in its truest, least political sense—guiding children to develop the empathy, self-esteem, and self-control needed for autonomy" (Gartrell, 1997, p. 35).

Teachers who implement effective guidance systems make informed decisions according to the following principles: They realize that social skills are complicated and take years to acquire, reduce variables that contribute to students' mistaken behaviors, practice positive teacher-learner relations, use intervention methods that are solution oriented, build partnerships with parents, and use teamwork with adults (Gartrell, 1997).

Control Versus Power

In Chapter 3 we stated that when a student tells a teacher, "You can't make me!" the student is correct. First of all, we hope you won't want to have control over your students. Second, even if you do want it, you'll never really have it. Most students willingly choose to engage in socially acceptable behavior that allows teachers to teach and learners to learn. Those students who choose to use their considerable creative abilities to find multiple methods of distracting and disrupting generally succeed—at least initially.

Although teacher control is an illusion, teacher power is not. Teachers have the power to make learners feel miserable, stupid, and ridiculed, as well as the power to make learners feel self-confident, accomplished, and empowered. Where do teachers get this power? Teachers operate from four different power bases: referent power, expert power, legitimate power, and reward/coercive power. Students may view teachers as powerful because they are people whom students like (referent power), because teachers have special knowledge (expert power), because they see teachers as authorities (legitimate power), or because teachers have the power to reward and punish (reward/coercive power). Table 5.1 summarizes the characteristics and limitations of these four power bases.

You Make the Call

Given the fact that instructional guidance typically is a primary concern for new teachers, preservice teachers often like to pose "what-if" guidance scenarios and then seek foolproof answers for those situations. Perhaps you'll recall that our response to requests for clear-cut, black-and-white, no-risk solutions to such problems is "It depends." The proper application of instructional guidance is always situation-specific. With that point in mind, what do you think you would do if confronted with the following situations?

Table 5.1
Teacher Power Bases

How does each power base work?	Referent	Expert	Legitimate	Reward/Coercive
Teacher provides motivation to behave because . . .	Students like the teacher as a person.	Teacher has special knowledge.	Teacher has legal authority.	Teacher can reward and punish.
What is the need for teacher control of student behavior?	Very low	Very low	Moderate	High
What are the requirements for using this power base?	Students must like the teacher as a person.	Teacher expertise must be perceived and valued.	Students must respect legal authority.	Rewards and punishments must be effective.
What are key teacher behaviors?	Communicates caring for students	Demonstrates mastery of content and teaching skills	Acts as a teacher is expected to act	Has and uses knowledge of students' likes and dislikes
What are the age limitations?	Useful at all levels	Less useful at primary level	Useful at all levels	Useful at all levels but less useful at senior high level
Are there any caveats?	Teacher is not the students' friend.	Heavily dependent on student values	Societal changes have lessened the usefulness of this power base.	Emphasizes extrinsic over intrinsic motivation

(Adapted from Levin & Nolan, 1996, p. 82)

Chaos at Recess

You're a student teacher taking your turn supervising recess, when a fight breaks out among some fifth and sixth graders. As fate would have it, an urgent parent phone call has delayed your cooperating teacher, and no certified teachers or paid school personnel are on the playground at that particular moment. Because you're student teaching in a third-grade classroom, you don't know any of the students involved. What do you do?

a. Tap the heels of your ruby slippers together and repeat quietly to yourself, "There's no place like home."
b. Form a committee to study the matter.
c. Use your cell phone to call your academic adviser and set up an appointment to discuss changing your major.

Students can learn conflict resolution strategies to help them solve their own problems.
(© Elizabeth Crews)

d. All of the above.
e. None of the above.

No One Is Listening

You're attempting to read the big book *A House Is a House for Me* to your first graders. It's the book you've selected to serve as the core book for your unit on houses and homes, and you've done your homework! Your lesson plans are both interesting and well organized, your procedures are complete, and your objectives and instructional activities are developmentally and culturally appropriate. However, no one is even listening to the book. Some students are chatting among themselves, others are pulling threads out of the carpet, and one student is incessantly tapping on the aquarium and talking to the fish. What do you do?

a. Give those students who aren't listening the patented "teacher look" you've been working diligently to perfect.
b. Send everyone out to recess fifteen minutes early.
c. Keep everyone—except yourself—in from recess.
d. Threaten to send those students who aren't listening back to kindergarten, since their behavior suggests to you that they apparently aren't ready for first grade yet.
e. In a very loud, yet pitiful, voice, tell all the students how disappointed you are in their behavior.
f. Consider all of the options provided in the Chaos at Recess scenario.

To the Principal's Office

In response to your request that he take his seat, a third grader engages in a tantrum—behavior consisting of yelling, turning red in the face, stomping his feet, and shaking his fists in your general direction. He announces in front of the entire class that he hates you, you always pick on him, you're not fair, and he's going to go tell the principal on you right now. (He's been to the principal's office before, so he definitely knows the way.) What do you do?

a. Put your hand on your hip, glare defiantly at the student, and retort, "Go ahead. See if I care."
b. Tell the student that if he leaves, he'll have detention for a week.
c. Tell the student that if he cooperates for the rest of the day, he'll earn fifteen minutes of extra recess time.
d. Tell the student that you think you hear his mother calling, but even if it isn't his mother calling, you'll be calling her soon if he doesn't sit down and be quiet.
e. Retire to a nice quiet community on the outskirts of Saratoga.
f. Consider all of the options provided in the Chaos at Recess scenario.

When I Was in School . . .

As the bus pulls away from the curb at the end of the day and you turn to go back into the school after completing your bus supervision assignment, your eye catches the cherubic face of one of your students, beaming at you from the bus window. You're about to smile and wave good-bye when your eye catches the student's extended middle finger, raised in a special salute intended just for you. What do you do?

a. Yell, "Come back here, you little coward!"
b. Stand there and suppress all of the inappropriate responses that come to your mind.
c. Smile and marvel at your student's impeccable timing.
d. Mutter to yourself, "When I was in school, we had respect for our teachers . . . "
e. Devote your evening to brainstorming fitting responses to your student's salute.
f. Consider all of the options provided in the Chaos at Recess scenario.

Appropriate Instructional Guidance Solutions

Now perhaps you're consoling yourself with the delusion that these scenarios are too absurd or contrived to actually happen. If that's the case, then it's our duty to interrupt your delusion to assure you that each of the above situations did indeed transpire. Although the situations transpired, we're happy to report that no one expired as a result. Each scenario starred a student teacher or first-year teacher who survived—and no doubt learned from—the incident described.

Of course, part of the reason the starring teachers survived these situations is because they rejected most or all of the options listed here for responding to them. We hope the response options we provided seemed clearly inappropriate or ridiculous to you. Unfortunately, some of them also may sound familiar, because you've seen teachers resort to such measures when they didn't know what else to do. Fortunately, many unpleasant situations can be prevented through the consistent use of guidance approaches that feature on-target, developmentally appropriate instructional opportunities for students.

Reflect Respond

If you were to find yourself in the situations described in the scenarios, what would you do? Write down some possibilities for appropriate responses to these student behaviors. We'll revisit these scenarios at the end of the chapter and give you an opportunity to evaluate your initial responses and offer other possible responses.

Goals of Instructional Guidance

The whole point of guiding students' behavior is to help them become independent, lifelong learners and learn responsibility, self-discipline, self-monitoring, and self-control. These are the long-term goals of instructional guidance. **Self-monitoring** means consistently tracking, recording, and evaluating one's own behavior over time. **Self-control** goes a step further to encompass the management of one's own behavior based, in part, on information generated through self-monitoring (Walker, 1995).

Teachers must engage in behaviors and exhibit attitudes that will help move learners closer to achieving these long-term goals of instructional guidance. At the very least, teachers should not engage in behaviors and exhibit attitudes that get in the way of learners' making progress toward these goals. Consequently, we feel it's important to highlight some of the factors that facilitate the acquisition of independence, lifelong learning, responsibility, self-discipline, self-monitoring, and self-control.

Guiding Students Toward These Goals

■ Encourage Learners

Praise often involves flattery, rewards, and comparisons and sometimes is overblown. Praising students actually can lead to discouragement, by instilling the idea that work that isn't praised has no value. Praise tends to focus students' attention on winning a reward rather than on doing a task for the satisfaction that comes from learning. It can work against positive self-concept,

lower students' confidence in their answers, and reduce the number of verbal responses they offer (Evans, 1996).

Encouragement, by contrast, is less judgmental and controlling than praise. It helps students appreciate their own behavior and accomplishments, while separating their work from their worth. Encouragement focuses on specific behavior ("Angela, I noticed how hard you've been working on your Power Point presentation"), as opposed to praise, which evaluates a finished product in general terms ("Angela, your presentation looks great").

The key to encouragement rests with avoiding discouragement. Teachers discourage when they set unreasonable and inappropriate standards for learners, focus on learners' mistakes in misguided attempts to motivate, make pessimistic interpretations about learners and their performance, compare learners, or dominate the learning process by being too helpful (Evans, 1996).

■ Promote Learner Independence

Although most everyone has the need to feel needed, effective teachers know that an important part of their job is to help their students need them less. They understand that there is such a thing as helping too much and that there are situations when helping actually hurts.

When helping hurts For example, did a well-intentioned adult ever redo something you'd truly worked hard on, because he or she wanted to make it "better"? Rita recalls the embarrassment she felt as a fifth-grade student when she discovered that a kind and caring teacher had "helped" her by performing some remedial repairs on a coffee can planter she'd made as a Mother's Day gift. Although there's no question that the planter benefited greatly from the teacher's intervention, Rita didn't really feel like giving it to her mother. The planter may have looked very nice, but it wasn't her work anymore.

When adults help too much, they send loud and clear messages to learners about their skills and competencies. Perhaps you can recall hearing a young child emphatically declare, "I can do it myself!" Perhaps you can recall being that child. "It" might have been pouring milk on your cereal, zipping your coat, tying your shoe, or getting yourself dressed. Later in life, "it" might have been making decisions regarding what electives to take, how to spend your free time, or who to spend your free time with. As parents of adolescents sometimes lament, "When kids are too young to help, they want to help. Then when they're old enough to help, they don't want to do anything." Might some of the adolescent attitude be attributable to learned helplessness?

When helping helps Teachers can promote learner independence by organizing the learning environment, including the physical layout of the classroom, in ways that reduce learners' dependence on the teacher or other adults. A well-designed learning environment reduces learners' need to ask, "What do I do next?" Effective teachers design and use guidance strategies and approaches that don't force learners to rely on them or other adults for materials, next steps, or permission to do what they need to do (such as sharpen their pencils or retrieve books and supplies from classroom shelves). Using multiple, over-

lapping tasks, these teachers empower learners to organize their own work and make some of the decisions regarding their work.

■ Provide Opportunities for Learner Choice and Decision Making

Kohn has much to say on the topic of choice and compliance. He equates compliance with punishment and concludes that "The more you punish someone, the more angry that person becomes, and the more 'need' there is to keep punishing" (1996a, p. 26). Compliance or punishment may work in the short term, but it also may have some unintended consequences. Consider the following hidden costs of compliance (Kohn, 1996a):

- It teaches learners that when they don't like the way someone is acting, they can make something bad happen to that person until he or she gives in.
- It warps the relationship between the punisher and the punished.
- It impedes the process of ethical development by changing the focus from "What kind of person do I want to be?" to "What do they want me to do, and what happens to me if I don't do it?"

Students learn to make good choices by having the opportunity to choose—not by just following directions (Kohn, 1993a).

Instructional Guidance Approaches

We've already indicated that there are many books and viewpoints on the topic of instructional guidance. As Figure 5.1 illustrates, approaches to instructional guidance fall on a wide continuum, ranging from teacher-

Teacher-Centered ←

Traditional	Behavior Modification	Assertive Discipline	Effective Momentum Management	Reality Therapy
• Learners do not have active role • Uses rewards, tokens, and punishment • Teacher corrects student behavior	• Learners aren't expected to solve problems • Teachers evaluate environment and the effect on student behavior	• Learners must accept the consequences of their actions • Teachers treat all students alike	• Learners are responsive to environmental changes • Teachers use prevention strategies	• Learners have needs that must be met by home or school • Unmet needs cause student misbehavior • Teachers use natural and logical consequences to develop student responsibility

Figure 5.1
Instructional Guidance Continuum

centered approaches that focus on discipline to learner-centered approaches that provide opportunities for student choice. The following paragraphs highlight these differing approaches, the theories they are based on, and their usefulness in the classroom.

Teacher-Centered Approaches

Teacher-centered approaches to instructional guidance include the traditional model, the behavior modification model, the assertive discipline model, and the effective momentum model. As you read the following paragraphs, think about which approaches most closely match your developing views of learners and the teaching/learning process.

■ Traditional Model

In the **traditional model,** the teacher uses praise and rewards to correct student misbehavior.

Theory base The traditional model is based on a study of schooling in America conducted by John Goodlad, a prominent education reformer. It reflects a teacher-centered approach that is still widely used today (Baron, 1992).

View of learners Learners are not given an active role in monitoring their own behavior. They respond and react more than they act.

Teacher-student relationship This teacher-centered approach uses positive reinforcement, such as praise and token rewards. When positive reinforcement doesn't work, teachers employ intervention strategies, including punishment. The traditional model relies most frequently on the following strategies for controlling misbehavior (Baron, 1992):

Learner-Centered →

Positive Discipline	Teacher Effectiveness Training	Responsible Classroom Management	Community
• Misbehavior is result of learners misjudging how to achieve their goals • Teacher helps students learn how to belong	• Every individual is unique, so learners must build their own confidence and solve their own problems • Teacher provides caring and open communication to help learners gain ability to solve own problems	• Learners are individuals to be treated fairly, not identically • Students encouraged to perform at high levels without using awards/bribery	• Learners are members of democratic society • Teachers and learners work together to solve problems

- Avoiding or ignoring minor misbehavior
- Glancing or staring at offenders to communicate the teacher's annoyance
- Reminding students of appropriate behavior when misbehavior occurs
- Using commands and directives when students are out of order
- Issuing verbal threats
- Separating a student from the site of the misbehavior

Teacher's role The teacher's primary role is to correct students' misbehavior.

Limitations The traditional model's focus on misbehavior and its reliance on punishment constitute limitations. In addition to emphasizing negative behavior, the traditional model does not encourage students to take responsibility for their own actions.

■ Behavior Modification Model

The **behavior modification** model doesn't expect learners to solve problems. Instead, the teacher observes student behavior and uses reinforcement to strengthen or diminish specific behaviors.

Theory base The work of Ivan Pavlov, Saul Axelrod, and B. F. Skinner provides the theoretical underpinnings for the behavior modification model. Skinner first tested his theories on pigeons and then applied the same techniques to humans. Stimulus-response theory, the foundation of the behavior modification model, asserts that the inner rational self is a myth and that environmental stimuli determine human behavior and can be modified to shape behavior to acceptable social standards. People work to avoid painful or unpleasant stimuli and seek those that are pleasant and rewarding (Skinner, 1968, 1982).

View of learners Behaviorists do not expect learners to solve problems based on their rational understanding of their inner selves.

Teacher-student relationship In this teacher-centered approach, positive and negative reinforcement are used to strengthen or diminish behaviors. Teachers can control the behavior management approach more precisely than they can control other approaches, because they can apply reinforcement based on precise readings of student behavior (Skinner, 1968, 1982).

Teacher's role The teacher's role is to evaluate the effect of variables in the learning environment on student behavior and alter those variables to produce acceptable behavior. First the teacher observes student behavior to establish a baseline; he or she then applies positive or negative reinforcement, measures the change in behavior, and reverses the procedure to double-check the effect of the positive or negative reinforcement (Skinner, 1968, 1982).

Limitations Behavior modification often is criticized as undemocratic and manipulative. Critics view its use of behavior control—without attempts to develop learners' rational capacities—as unacceptable in a society that professes to be based on democratic, humanistic principles. Behavior modification eliminates learner choice and problem solving and is highly teacher-centered (Queen, Blackwelder, & Mallen, 1997).

What behaviorists call reinforcement, others call bribery (for example, Kohn, 1993b). In response to this criticism, some (such as Walker, 1995) counter that reinforcement is used in a systematic fashion throughout all levels of society. For example, the government sets up incentives to encourage the public to behave in certain ways, and parents use reinforcement in the process of socializing children. Supporters of reinforcement and behavior management say it produces therapeutic benefits for children (Walker, 1995).

■ Assertive Discipline Model

In the **assertive discipline** model, the teacher applies the same standards and expectations to all students.

Theory base Lee and Marlene Canter (1976, 1985) developed the assertive discipline model. They based their model on assertion training, which postulates that people respond to conflict in one of three ways—passively, assertively, or with hostility.

View of learners When learners misbehave, they decide by choice to accept the negative consequences of their actions (Good & Brophy, 1994).

Teacher-student relationship In this teacher-centered approach, teachers treat all students alike. They apply the same standards to all students and have the same expectations for success for all students. Teachers adhere to their demands and never negotiate with noncomplying students. They use limit-setting consequences such as time outs, detention, and removal of privileges. Other strategies associated with assertive discipline include contracts, positive assertions, rewards, and the development of discipline plans (Canter & Canter, 1976, 1985, 1993).

Teacher's role Adherents of the assertive discipline model believe teachers possess the right to teach and meet basic student needs. Consequently, teachers also have the right to assert maximum control over student behavior within the classroom (Canter & Canter, 1976, 1985, 1993).

Limitations Critics contend that the assertive discipline approach produces an authoritarian environment in which students have virtually no rights and are mere followers of teachers' demands. Also, because this approach ignores individual differences, learners have no responsibility to develop self-control or the ability to build consensus.

Independent reviewers have concluded that Canter and Canter and associates have failed to conduct systematic research on the effectiveness of this approach, which they've been promoting for over two decades. The limited research available on the approach does not support Canter and Canter's claims for its effectiveness (Queen, Blackwelder, & Mallen, 1997).

■ Effective Momentum Management Model

The **effective momentum management** model emphasizes creating an environment that prevents disruptive behaviors.

Theory base After videotaping teachers in their classrooms and analyzing their behaviors, Jacob Kounin (1970) concluded that certain teacher behaviors resulted in higher student achievement and a lower incidence of discipline problems than did others and that the most effective teachers focused on prevention strategies rather than intervention strategies. Based on his findings, Kounin developed the effective momentum management model, which features intervention strategies.

View of learners Kounin views learners as being responsive to environmental changes and stimuli.

Teacher-student relationship This teacher-centered approach requires that teachers know their students and students' behaviors. Its array of prevention strategies includes the following (Baron, 1992; Kounin, 1970):

- "With-it-ness": awareness of all that's going on in the classroom (for example, monitoring the rest of the class while working with individual students)
- Overlapping: skill in handling two or more matters at the same time (for example, dealing with a misbehaving student while maintaining the flow of a lesson)
- Momentum: pacing instruction to address the lesson's objectives without digressions or distractions on the part of students
- Smoothness: skill in moving from one activity to another without being distracted by irrelevant matters (for example, switching from whole-group to small-group activities)

Teacher's role In the effective momentum management model, the teacher's role is to create a learning environment and conditions that prevent disruptive behaviors and misbehaviors.

Limitations Learners don't have much of a role in this approach, given its focus on prevention strategies, which are the teacher's responsibility to implement. In addition, Kounin doesn't address the question of what happens when prevention doesn't work, and there certainly will be times when prevention strategies don't work for every learner in every situation (Good & Brophy, 1994).

Learner-Centered Approaches

The reality therapy model serves as a bridge between the teacher-centered and learner-centered approaches. We include it here, under learner-centered approaches, because its emphasis on learner responsibility leads to the approaches at the learner-centered end of the continuum.

■ Reality Therapy Model

In the **reality therapy model,** teachers help students identify inappropriate behavior and plan more desirable behavior.

Theory base According to psychiatrist William Glasser, people must learn to acknowledge their irresponsible behavior and take the necessary steps to behave in more logical and productive manners. They must learn to accept the consequences of their actions and learn to live responsibly, without infringing on others' rights (Glasser, 1969, 1986).

View of learners Learners have certain needs that must be met either by the home or by the school. The cause of student misbehavior is unmet needs (Glasser, 1969, 1986).

Teacher-student relationship The focus is on the learners' misbehavior. Teachers help learners describe the inappropriate behavior and plan alternate and desirable behavior. Teachers use natural and logical consequences, rather than praise and punishment, to develop responsibility. Contracts and class meetings are strategies they use to define problems, propose solutions, and construct plans for change (Glasser, 1969, 1986; Good & Brophy, 1994).

Teacher's role The teacher's role is to help learners succeed at what they undertake, in their efforts to learn and in their pursuit of self-worth. If learners misbehave, the teacher's role is to help them meet their unmet needs. If learners can't adjust and make their behavior appropriate, the teacher finds ways to alter her or his own behavior or the learning environment (Glasser, 1969, 1986; Good & Brophy, 1994).

Limitations Some critics say the reality therapy model is not based on a realistic understanding of teaching or the amount of time teachers have to fulfill their instructional responsibilities. In addition, some students may have limited ability to develop effective plans for behavioral improvement (Queen, Blackwelder, & Mallen, 1997).

■ Positive Discipline Model

The **positive discipline** model emphasizes supporting students in reaching their goal of belonging and contributing.

Theory base Rudolf Dreikurs and Alfred Adler postulate that, within a social context, children strive to overcome a sense of inferiority by establishing a unique set of goals and a plan for achieving those goals (Dreikurs, Grunwald, & Pepper, 1982).

View of learners Misbehavior is the result of learners' errors in determining how to achieve their primary goals, the most important of which is belonging (Dreikurs, Grunwald, & Pepper, 1982).

Teacher-student relationship Positive discipline rejects the use of punishment, positive reinforcement, praise, and negative reinforcement. Encouragement, natural consequences, and logical consequences are among its fundamental components. Class meetings provide a format for discussing problems and policies and for modeling democratic processes (Dreikurs, Grunwald, & Pepper, 1982; Eaton, 1997; Nelson, 1987).

Teacher's role The teacher's role is to teach learners how to belong, to value equal rights and the dignity of all human beings, and to contribute to the communities in which they live (Dreikurs, Grunwald, & Pepper, 1982; Eaton, 1997; Nelson, 1987).

Limitations It can be difficult for teachers to determine the underlying goal of learners' behavior. Also, the difference between a logical consequence and punishment can be slight and potentially problematic. Finally, class meetings may add stress for students who don't possess the communication skills or emotional maturity to participate effectively in them (Queen, Blackwelder, & Mallen, 1997).

■ Teacher Effectiveness Training Model

The **teacher effectiveness training** model supports individuals in gaining confidence in their abilities by using open communication.

Theory base Thomas Gordon based his theory on the work of Abraham Maslow and Carl Rogers. According to this view, the cause of student misbehavior is teachers' forcing children to behave in a certain way, which interferes with their drive to achieve growth and to respond to their rational selves (Good & Brophy, 1994; Gordon, 1974).

View of learners The uniqueness of each individual makes it impossible for teachers to direct students appropriately. Learners must therefore develop confidence in their ability to listen actively, make decisions, take ownership of problems, and solve problems (Good & Brophy, 1994; Gordon, 1974).

Teacher-student relationship This learner-centered approach relies on open communication between students and teachers, with student-teacher relationships characterized by transparency or openness, caring, interdependence, separateness, and mutual effort to meet each other's needs (Good & Brophy, 1994; Gordon, 1974).

Teacher's role The teacher's role is to use open communication to facilitate the development of learners' capacity for rational analysis and for solving life's problems. Teachers encourage learners to examine their feelings in a nonjudgmental manner to develop a rational understanding of their troublesome behavior (Good & Brophy, 1994; Gordon, 1974).

Limitations Differences in learners' growth and development make implementation difficult; some learners have difficulty with complex reasoning (Queen, Blackwelder, & Mallen, 1997).

■ Responsible Classroom Management Model

The **responsible classroom management** model considers learners as individuals to be treated fairly, but not necessarily identically.

Theory base The responsible classroom management model is based on the work of Abraham Maslow, Mortimer Adler, Erik Erikson, Richard Havighurst, Lawrence Kohlberg, and Jean Piaget. It postulates that all children move through several common developmental stages, which determine the behaviors, attitudes, cognitive capabilities, and physical characteristics that they exhibit at any particular time. These stages, in combination with children's interactions with others, influence the patterns of behavior that they adopt (Queen, Blackwelder, & Mallen, 1997).

View of learners This model assumes that most learners can be taught to behave responsibly in the classroom. Learners are considered individuals who must be treated fairly, but not necessarily identically (Queen, Blackwelder, & Mallen, 1997).

Teacher-student relationship In this learner-centered approach, teachers clearly state the objectives of all planned classroom activity. Precise and sensitive instructional guidance builds a foundation for responsible student behavior. Students are involved and encouraged to perform at higher levels. Teachers encourage and acknowledge exceptional performance and responsibility but don't use rewards or other forms of bribery to sustain responsible students. Use of external rewards is avoided. Teachers use natural and logical consequences to teach learners to self-correct their behavior (Queen, Blackwelder, & Mallen, 1997).

Teacher's role The teacher's role is to provide learners with unconditional acceptance, security, and the certainty of belonging. The teacher also helps learners develop problem-solving abilities; models values, attitudes, and behaviors that lead learners to behave responsibly; and develops responsible learners who can live productively in a democratic and multicultural society (Queen, Blackwelder, & Mallen, 1997).

Limitations Some criticize the model's use of logical consequences as thinly disguised punishment (Kohn, 1993b). If teachers are not sensitive to value conflicts, classroom interactions will remain shallow and unproductive (Queen, Blackwelder, & Mallen, 1997).

■ Community Model

The **community model** focuses on working together to solve problems.

Theory base Alfie Kohn builds on the work of John Dewey and Jean Piaget and on the notion that the goal of education is to prepare learners for participation in a democratic society (Kohn, 1991, 1993a, 1993b, 1996a).

View of learners Learners are members of a democratic society, are viewed positively, and are encouraged to become involved (Kohn, 1991, 1993a, 1993b, 1996a).

Teacher-student relationship This learner-centered approach focuses on developing relationships and caring communities and giving learners real choices. Teachers and learners work together to solve problems (Kohn, 1991, 1993a, 1993b, 1996a).

Teacher's role Kohn asserts that traditional classroom management consists of manipulating students' behavior, which is a convenient approach for the teacher because it assumes that the fault lies with the students (1993b). Kohn suggests that, instead, when there's a problem the teacher should focus on what students are being asked to do, not just on students who don't do what they're asked to do. When students are off-task, a teacher should ask himself or herself "What's the task?" rather than "How do I get students back on task?" When students behave inappropriately, the teacher needs to look at the classroom culture and climate she or he helped to create. The teacher's primary role is to build safe, caring learning communities (Kohn, 1993b).

Limitations Working with students to build safe, caring learning communities takes considerable time, patience, and skill. Consequently, quite often discipline programs revert to what's easy—punishments and rewards.

Kohn doesn't directly address violent and disruptive behavior. He also skirts the issue of alternatives to logical consequences, which he says are just another form of punishment. However, what he approvingly labels "making restitution" others would consider logical consequences (Eaton, 1997).

Kohn paints in broad strokes, which results in lack of specificity and tends to leave some important questions unanswered. For example, Kohn wonders aloud if rules are necessary; perhaps they are necessary for learners who like to know what the rules are before the game begins.

Your Model?

Which of the instructional guidance alternatives we've described best matches you and your beliefs? How does your view of learners mesh with the different models? What happens if you prefer a learner-centered approach to instructional guidance and the school where you're employed ascribes to the teacher-centered assertive discipline model? Keep these and similar questions in mind as we focus on some of the many facets of organizing the learning environment.

Organizing the Learning Environment

Among the many roles teachers play, one of the most important is providing organizational structures that increase the chances for learner success. This is what we mean when we say **organizational structures:** the way in

which teachers organize people, time, space, resources, curricula, and materials. These things can directly affect learner success.

Purpose

There are three main purposes for imposing a system of organization on learning environments:

1. To set both learners and teachers up for success
2. To allow both learners and teachers to have more time for the business of learning
3. To facilitate the development of a culture of productivity, by valuing productivity and results, not just activity; by creating an environment of trust and openness; by acting with consistency so learners know how to act; by setting and communicating high standards and expectations; by communicating the organization's shared mission (that is, the long-term goals); and by learning from and about students by listening, observing, and asking questions (Akin & Hopelain, 1986).

Creating Learning Communities

In establishing cultures of productivity within their classrooms, teachers are actually going about the business that Kohn refers to as creating learning communities. Trust and openness serve as the foundation on which learners and teachers build such communities. That trust stems in part from a shared understanding of what is expected from all members of the community (such as high levels of productivity, consistency of expectations, and mutual respect). When teachers listen to, observe, and ask questions of learners, they model the interest and caring they want students to demonstrate as well.

Organizing the Learning Environment to Match Instructional Objectives

Keeping in mind that the purpose of organizing the learning environment is to set both learners and teachers up for success, to allow both learners and teachers to have more time for the business of learning, and to facilitate the development of a culture of productivity, it makes sense to match organizational structures to instructional objectives. Doing so increases the likelihood that learners will be able to achieve instructional objectives, because the organizational structures will complement and facilitate the instructional activity.

Grouping Strategies

Grouping strategies (that is, having students work as a class, in small groups, in pairs, or individually, depending on the instructional objective) are one type of organizational structure. They can either advance or impede learners' attainment of instructional objectives, depending on how well they're matched to the objectives and how well the teacher sets up the learning environment to accommodate them.

For example, prior to beginning a whole-group discussion, a teacher might have learners form a circle or semicircle. Since eye contact and nonverbal communication serve important roles in discussions, it's helpful if participants can see, as well as hear, one another. If the instructional objective requires collaborative responses, then the learning environment should enable learners to work effectively in small groups. Clustering desks or seating learners at tables are viable options for promoting collaborative efforts, as is asking groups to locate themselves at different points on the carpet. By contrast, individual work and conferencing require a quiet, more private place that is set apart from the high-traffic areas of the classroom.

In addition to rekindling learner interest, variety in group arrangements also can encourage students to try out different ways and styles of learning. Just because some students (Maybe you?) say they "hate group work," that doesn't mean teachers should never nudge them gently out of their individualized instruction mode and into the "real world" of collaboration. After all, most adults—and certainly teachers—must learn to interact effectively with other people to succeed in the workplace and in life. In the following sections, we describe whole-class, small-group, and individualized instruction.

■ Whole-Class Instruction

Large-group or whole-class arrangements are appropriate when the instructional objectives require presenting information to everyone in the class. Student presentations, unit overviews, video or multimedia presentations, guest speakers, readers' theaters, and literature sharing sessions are examples of activities that benefit from whole-class arrangements, which allow all students to see and be seen, to hear and be heard.

Although rows and columns may serve this purpose, if discussion is a part of the activity, physical arrangements that allow all participants to see and hear all other participants can facilitate discussion. Circles, semicircles, and U-shaped arrangements generally meet this criterion. However, certainly there are other possibilities. An eighth grader whose teacher often used circular arrangements to facilitate class discussion once asked her teacher, "Do we have to make a circle again?" The teacher replied, "No, you can sit in any arrangement you want, as long as everyone in the class can see everyone else."

■ Small-Group Instruction

Skills groups The small groups called **skills groups** consist of a heterogeneous mix of students who share a common instructional need. Once that need has been met, the group disbands. That need might consist of reaching a higher level of use with a particular skill, or learning a specialized skill that the rest of the class doesn't need to learn at that particular time. For example, a teacher might elect to use skills groups if some students need a clearer understanding of how to incorporate dialogue in their writing. Such a group could focus on the mechanics of including direct quotations within a story (that is, how to use commas, periods, and capitalization with quotations) and on finding alternatives to "he said," "she said," and "they said."

Teachers also might use skills groups to introduce a particular researching skill to a specific group of students. For example, if one group of students wants to use photographs and video clips to present the results of their research, a teacher can arrange a time to help those students learn the procedures for scanning photographs into a computer file or importing video clips into a multimedia presentation. Certain students also may need to acquire specific research skills to locate the information they need. These skills might include learning how to conduct computer-assisted searches, using microfiches, citing sources appropriately, or learning how to determine if Internet sources are valid and reliable.

Interest groups As their name implies, **interest groups** are small groups formed simply on the basis of students' interests. For example, for an interdisciplinary unit with the theme of "survival," one group of students might choose to read and discuss London's *Call of the Wild,* while others might select Paulson's *The Hatchet* or *Swiss Family Robinson* or *Robinson Crusoe.* Different small groups could then be formed to discuss each of these works.

Research interests also can lead to the formation of interest groups. An interest in "survival of the fittest" could lead a group of students to learn more about natural selection. An interest in space travel could lead another group to research what they would need to survive a trip to Mars and back, and an interest in medical advances could lead some students to research cancer survivors and the roles that attitude and humor played in their recovery processes.

Literature circles In **literature circles,** which are similar to adult book discussion groups, members choose their own books and discussion partners, establish a reading and meeting schedule, and determine how they will share their reading with one another. Students who are members of literature circles often use journaling or note-taking strategies to record their responses as they read and to guide discussions when they meet as a group (Daniels & Bizar, 1998).

Peer response and editing groups In the groups known as **peer response and editing groups,** three to five students meet regularly to offer one another feedback and advice on their writing. In some groups, students write their comments and edits directly on copies of their peers' drafts, whereas others limit feedback to oral comments.

■ Cooperative Learning Groups

One of the instructional strategies we profile in Chapter 9 is cooperative learning. Consequently, here we describe just two types of cooperative learning groups.

Jigsaw groups To use **jigsaw groups,** a teacher divides his or her class into a number of five- or six-member, heterogeneous study teams. Each member of each team is responsible for learning a portion of the material assigned to the team. After the teams have learned the material assigned to them, the teams split up, and members of different teams meet to discuss the information they

were assigned to study. Students then return to their own teams and teach their group members what they learned from the other teams (Arends, 1998).

Group investigation In **group investigation,** five- or six-member heterogeneous groups select topics for study, and each member pursues an in-depth investigation of a chosen subtopic. Group members then synthesize the results of their investigations and collaboratively select an appropriate format for summarizing their results. Group members plan and execute a group presentation and then evaluate both the group's investigation process and its finished product (Arends, 1998).

■ Individualized Instruction

Sometimes a student's instructional needs necessitate the use of **individualized instruction.** Advanced study, specialized interests, and remediation, for example, all might require or benefit from individualized instruction. Tutors, mentors, parent volunteers, peer tutors—as well as teachers—may provide a student with individualized instruction.

Illnesses or physical conditions that prevent students from attending school for extended periods of time also may necessitate the use of individualized instruction. For example, as a freshman in high school, Rita had the dubious distinction of experiencing the formal curriculum via individualized instruction. A collision involving a tree and the toboggan on which she was a passenger resulted in a dislocated hip for Rita. Consequently, she was confined to a body cast and hospital bed for the following five weeks, and school came to her in the form of an itinerant teacher. We're pleased to report that both Rita and the teacher survived this ordeal, although the tree did not.

SCHEDULING

Schedules serve as an extension of teachers' philosophies and perspectives on the teaching/learning process. The schedule you establish and follow should reflect the beliefs you hold about learners, the learning process, and variables that impede or facilitate learning.

■ Daily Schedules

For example, if you subscribe to an integrated-curriculum approach to teaching and learning, your daily schedule should reflect that. Your schedule would consist of blocks of time for learning broad curriculum areas rather than distinct times for each identifiable curriculum component. Rather than stating that phonics is at 9:00, reading is at 9:30, and writing is at 10:00, your schedule might feature a daily language arts block from 9:00 to 11:00.

■ Unit Schedules

In addition, you likely would have unit schedules, because units are a useful technique for promoting and facilitating an integrated-curriculum approach.

Creating unit schedules might involve you in collaborative planning with other teachers. Sometimes teachers at the same grade level plan together and team-teach at least part of the day.

■ Collaborative Scheduling

Collaborative scheduling can facilitate combined class projects, as well as the scheduling of special classes, such as music, art, and physical education. At the middle school and high school levels, the implementation of an integrated-curriculum approach typically means that teachers from different content areas (history, sociology, mathematics, biology, chemistry, English) must meet on a regular basis to collaboratively plan and schedule instruction.

Procedures and Routines

As indicated earlier, procedures and routines are legitimate features of organizational structures. They provide some of the reliability most learners need to feel comfortable and to be productive. Knowing what to expect with regard to "how we do things here" enables learners to act independently and reduce their reliance on the teacher.

■ Meet and Greet

Morning, or "meet and greet," routines tend to be particularly noticeable in early childhood and primary learning environments. However, middle school and secondary level classrooms also can benefit from some sort of established routines and procedures for entering the classroom and preparing for the day. Taking attendance and lunch count, organizing books and materials, and recording student work are among the more mundane but necessary details teachers must attend to.

However, attending to the affective domain is critical to creating a positive learning environment where students feel safe, comfortable, and welcome. Consequently, teachers need to acknowledge learners of all ages as they enter the learning environment and respond to them warmly and positively. Although doing so may interrupt other teacher tasks, such as assessing student work, recording grades, and completing last-minute preparations, meeting and greeting students is certainly as important—if not more important—as those teacher tasks it interrupts.

■ Distributing and Collecting Instructional Materials and Student Work

When learners know what the procedures and expectations are for their classroom arrival, teachers can focus more of their attention on meeting and greeting, as well as on listening to students and the things they've been waiting to share with a significant adult in their lives. The same is true regarding the distribution and collection of instructional materials and student work. When teachers establish procedures for these tasks and clearly communicate those

procedures to students, students then have the independence to proceed without interrupting teachers to ask for directions. Learners are no longer frozen in time, waiting for an opportunity to ask teachers what to do next.

■ Transitions

Procedures and routines also make for smoother and more effective transitions. Because time on task and transitions affect academic achievement, and because there are so many transitions in a typical school day, it's critical for teachers to implement procedures that make transitions easier. Part of setting learners up for success is making sure they know what they are to do when they arrive at school in the morning; what happens in between classes or in between different instructional activities; what procedures they should follow regarding lunch, bathroom breaks, and other basic human needs; and what tasks need to be completed before they leave school each day.

Do you remember eating lunch on your first day of school? There was lots to learn! First of all, even before the day began your teacher already was asking you very pointed questions regarding your dietary decisions. Cold or hot lunch? White or chocolate milk? Peanut butter or plain? Did you bring your lunch money? When it was actually time to go to lunch, there was the whole business of lining up. The kids who brought their lunches had to be in the front of the line, right behind the line leader. Once you reached the lunch room, if you were having a hot lunch, you had to select a fork, spoon, and napkin (they didn't trust you with knives), slide your tray along the counter, smile at the "lunch ladies," pick up your milk, and then carefully negotiate the long and treacherous trip to your assigned table.

Hope you weren't too nervous to eat, because some teachers made an avocation out of "checking your tray." A clean tray is a happy tray, you know. You quickly learned that empty milk glasses are not useful receptacles for hiding unwanted green things such as creamed spinach (an example of incidental learning). Years later, milk cartons were introduced; they were much more useful for this purpose.

If you successfully passed tray inspection, you then had to return your tray to the kitchen, being sure to first place any paper products in the conveniently placed trash bin. Then it was outside for recess—no side trips to the restroom allowed. Recess had its own special set of procedures, but we'll spare you that particular group of organizational structures.

Our point is that, yes, procedures and routines can serve a purpose. However, they can effectively serve a purpose only when they're clearly communicated to learners, when teachers and learners collaboratively arrive at a shared understanding of what those procedures entail, and when learners understand exactly what the purpose of the procedures is. And once those conditions have been met, teachers cannot assume that learners will know how to follow the procedures or be able to follow them. For example, if teachers believe students should line up before being dismissed for lunch, they may need to teach students, especially very young students, what "lining up" means. For one kinder-

garten teacher we knew, lining up meant that the line leader stood on the floor tile with the star on it, and the other children lined up behind him or her on adjacent tiles, one child per tile. We wondered what purpose this precision served and if that purpose was ever communicated to the students. Because it takes time and effort to teach and learn procedures, it's important for teachers to implement procedures only if they serve necessary and legitimate purposes.

■ Contingency Plans

Establishing routines and procedures does not guarantee that instructional activities always will run smoothly and that every moment of every day learners will be productively engaged. Thus, in addition to establishing purposeful routines and procedures, effective teachers plan for interruptions and expect the unexpected.

They make use of if-then logic to respond to predictable interruptions, such as the inevitable fire drills, tornado drills, and picture days (for example, *if* the fire alarm sounds, *then* I grab the class roster, designated students make sure all windows are closed, students walk quietly and quickly to our designated place well away from the building, and the last student out of the room closes the door).

What Should You Know About Rules?

Rules function as effective components of organizational structures when they enable teachers to do their best at teaching and students to do their best at learning. However, some researchers question the need for rules, especially specific ones that come complete with predetermined consequences (Kohn 1996a). They wonder if they're necessary at all and say that specific rules make lawyers, always looking for loopholes, out of learners. Tell that to a young female teacher who, after working with middle school males for a week, felt the need to establish a new rule: "Don't touch the teacher."

The Purpose of Rules

What would happen if there were no rules? What would that do to learners? Are there students whose main recreational activity consists of finding ways to "beat the system," regardless of what particular system is in place? For example, when a group of high school students wore bedroom slippers to school, administrators told them they could not continue to do so without consequences. The students' response to the administrators was predictable: "There's nothing in the dress code that says it's against the rules to wear bedroom slippers to school." The next year, the school's dress code was amended to specifically prohibit the wearing of bedroom slippers. As an informed decision maker, what do you make of this situation? Was the school's response to the students' behavior appropriate?

The Game Called School: Necessary and Unnecessary Rules

Reflecting on her experience learning to play chess, Rita recalls the interesting teaching style her older cousin used to acquaint her with the rules of the game. During the course of playing a game of chess, this cousin would invoke a rule (for example, castling) and then explain to Rita what he had "done to her" and which rule he had applied in doing it. Rita would have much preferred knowing all the rules before the game began. Some learners (and teachers) feel the same way about the game called school. They want to know what the rules are before the game begins, and once the game has begun, they don't want the rules to change without their knowledge. For example, how comfortable would you be as a member of a learning environment in which the teacher didn't communicate her expectations, assessment procedures, and intended outcomes to you? How would you feel if when you asked a teacher about his expectations regarding what you'd be doing in the class and how your work would be assessed, he responded: "I'm not sure, but we'll figure all of that out as we go along"?

In most situations involving more than one person, rules of some sort can serve a useful purpose. With regard to instructional and organizational guidance, rules should be established only when they serve one or more of the following purposes (Cangelosi, 1990):

- They maximize on-task behaviors.
- They discourage disruptions to other classes or to people located in or near the school.
- They provide a safe, secure environment for students, school personnel, and visitors.
- They maintain acceptable standards of decorum among students, school personnel, and visitors to the school.

Rules that don't serve a legitimate purpose are not only unnecessary, they also can create problems in at least three different ways (Cangelosi, 1990):

- Students who follow unnecessary rules become conditioned to being regulated by an authority even when there's no rational basis for such regulation.
- Students who resist unnecessary rules generally "get into trouble," and as a result they may disengage from the learning process.
- Students tend to generalize that if some rules are unimportant, then other rules must also be unimportant.

Guidelines for Developing Rules

If and when you decide that a few carefully crafted rules could be helpful to your attempts to create a productive learning environment, ask yourself these questions: What kind of classroom culture and climate do I want to create? Would I want to be a student in this room? Whose classroom is this, anyway? What rules do students need to feel safe and to learn? What role should students play in developing rules?

Authoritarian Versus Collaborative Rule Making

Involving learners in developing rules that have the purpose of providing structure and guidance for the teaching/learning process can be an instructional activity in and of itself. **Collaborative rule making** can teach learners responsible citizenship skills and also can provide an appropriate middle ground between authoritarian administration and permissiveness (Schimmel, 1997). Authoritarian approaches to rule development violate effective teaching principles, encourage some students to subvert or ignore rules, and undermine students' self-discipline and citizenship education.

Such approaches to school code or student handbook development typically result in destructive rule making. Generally speaking, in authoritarian approaches, rules are negative, restrictive, and unexplained; students don't participate in rule development; rules are written and distributed in a formal, legalistic manner rather than in an educational manner; and rules lack standards or procedures.

Negative consequences tend to accompany authoritarian approaches to rules. For example, teachers become disciplinarians and policers of the student body rather than educators. Systems that depend on external control don't teach self-control. They make teachers responsible—not students. Consequently, it becomes teachers' responsibility to catch students "being bad" and punish them.

In contrast to authoritarian approaches to rule making, collaborative rule making features learner participation. Rules that result from collaborative processes tend to exhibit the following characteristics (Schimmel, 1997):

- *They're balanced, reasoned, and positive.* Rules identify expectations rather than describing what is unacceptable behavior.
- *They're educational.* Teachers teach rules in much the same way that they teach curriculum content.
- *They're fair.* Fair rules don't discriminate; are relevant to educational goals; are easy to understand; are clear, specific, and objective; are enforceable; and don't conflict with constitutional values.

Guidelines for Evaluating Effective Rules

Here are a few simple principles to guide the development and implementation of effective rules.

- *State rules positively.* That is, clearly state what is wanted, as opposed to what is not wanted (*"Listen to others,"* not *"Don't talk"*).
- *State rules in terms of behavior, when possible.* For example, what does "Work quietly" mean? Does it mean don't talk at all, talk quietly enough so that you don't disturb others who are working near you, or don't make so much noise that you disturb the class next door? When it is neither desirable nor possible to state rules in observable terms, then teachers and learners must collectively determine what the rules mean to them. *"Walk in the hallways"*

is an example of a rule stated in observable terms, whereas *"Be courteous"* is an example of one that is not.

- *Make sure rules pass the "less is more" reality check.* Do the rules fit on the fingers of one hand? Or are there too many rules for students—and teachers—to remember? For example, the summer program we plan and implement has one overarching guideline: "Students who choose to behave in ways that interfere with other students' opportunities to learn and/or the instructor's opportunities to teach, in so doing choose to forfeit their own opportunities to participate in the Institute." That principle has served well as a criterion to guide our decisions regarding whether or not to allow students to continue their participation in the program.
- *Communicate and collaboratively clarify what your rules mean.* Teachers and learners must arrive at a shared understanding of what their rules mean to them. In this case, failure to communicate can result in learners' and teachers' laboring under different assumptions about what rules mean and how they should be applied.
- *Post the rules.* "Out of sight, out of mind" is a principle that sometimes applies to rules. However, it's difficult for members of a learning community to protest that they didn't know about a rule when it's posted in plain sight and printed in the students' own handwriting—or word processing.
- *Apply the rules consistently.* If rules are truly necessary and serve a legitimate purpose, then they should be applied consistently. For example, if you and your students have a rule that states that, except in the case of emergencies or illness, work must be handed in on time, then you need to follow that rule—even if one of your favorite students calls you the night before a major project is due and wants to know if he really has to turn in his project the next morning.

Individual Differences: Is There Really an Exception to Every Rule?

Having emphasized the importance of applying rules consistently, we now dare to ask, Is there really an exception to every rule? Might individual differences or special circumstances sometimes justify a rule exception? As you reflect on your school days, do you recall any situations when a rule exception was appropriate? Do you recall any teachers who made rule exceptions for what they considered to be legitimate reasons? If so, did you agree that the situations warranted the exceptions?

Given the fact that no one can predict every situation that might possibly transpire, it seems reasonable to conclude that there will be times when exceptions are made to rules to accommodate individual differences or to respond appropriately to special circumstances. For example, a school might have the policy that students must eat lunch in the cafeteria. However, if the cafeteria is not accessible to people with limited mobility, then some students may not be able to eat in the cafeteria.

Reflect Respond

Use what you know about the purposes of rules and the guidelines we've discussed for developing effective rules to evaluate the following rules, some of which were written by students. The first five rules (Prosise, 1996) are described as basic guidelines for successful interpersonal relations between teachers and students. In your estimation, how do they measure up to the guidelines for effective rules? (1) Listen when someone else is speaking. (2) Be respectful of people. (3) Use appropriate language. (4) Cooperate with others. (5) Raise your hand when you want to talk.

The following rules were developed by elementary students and their teacher. Do you think these guidelines would facilitate your attempts to create a culture of productivity for your students and yourself? What modifications, if any, would you make? (1) Listen to who is talking. (2) No fighting. (3) Be kind to classmates. (4) Raise your hand to talk. (5) Cooperate. (6) Don't disturb others when working.

Some teachers allow students to participate in proposing rules for teachers, as well as for themselves. The following rules resulted from one such collaborative effort at developing rules for teachers. How would you evaluate the effectiveness of these rules? Would they facilitate or inhibit your productivity as a teacher? What modifications, if any, would you make to them? Would you be willing to let your students propose rules for you? (1) No yelling. (2) Show kids what they need to learn. (3) Reward kids who do well. (4) Remove kids who inhibit learning. (5) Tell a few jokes. (6) Bring fun stuff to our room.

Natural and Logical Consequences

The use of **natural consequences** is based on the principle that reality can influence students' behavior more than teachers can (Evans, 1996). For example, the natural consequence of pouring too much milk into a glass is that you get to clean up the spilled milk. Such situations serve as "teachable moments" that provide authentic and natural contexts for learning. "Children learn naturally if adults can resist the temptation to rescue them from every predicament in which they find themselves" (Eaton, 1997, p. 45).

Logical consequences are more complicated than natural consequences, but they still can be effective, says Eaton (1997). Kohn disagrees, calling logical consequences thinly veiled punishment (1996a). What are **logical consequences**? A student who is disruptive during shared reading is given the choice of listening quietly or returning to her seat. The purpose of the logical consequence is not to punish the student but to change the student's behavior. Consequently, a logical consequence must make clear the connection between a learner's behavior and the resulting action (Eaton, 1997).

Teachers may choose to use logical consequences when natural consequences interfere with other people's rights or negatively affect their well-being. For example, in the poem "Sarah Cynthia Sylvia Stout Would Not Take

the Garbage Out" (from Shel Silverstein's *Where the Sidewalk Ends*), a natural consequence of Sarah Cynthia Sylvia Stout's refusing to take the garbage out is that the house begins to smell as the garbage piles up week after week. This is problematic if other people have to live among the mess. Sarah Cynthia Sylvia Stout's refusal to take the garbage out impinges on others' rights to clean air and hygienic living conditions. Therefore, in this situation, logical consequences are more appropriate than naturally occurring consequences. What would serve as a logical consequence for Sarah Cynthia Sylvia Stout's refusal to take the garbage out?

Now transport Sarah Cynthia Sylvia Stout to a classroom setting. What happens when her general untidiness impinges on the general ambience of the learning environment, as well as on the ability of others to breathe freely and concentrate on their work? What would serve as a logical consequence of Sarah's failure to tidy up her overflowing desk or properly dispose of the rotting banana peel buried among the mysteries crammed inside her cubby?

Guidelines for Effective Logical Consequences

Should you choose to use logical consequences in response to students' actions, we offer the "four *R*" test (Evans, 1996) as a means of helping you determine if what you intend as a logical consequence is, in fact, logical and appropriate. Effective logical consequences

Relate logically to the behavior.

Are *reasonable*; that is, they focus on the immediate situation or event.

Respect the student's dignity and do not judge the student as good or bad.

Allow the student to be *responsible* or accountable for his or her actions.

With the four *R*'s of logical consequences in mind, how do the following consequences measure up?

- Repetitive sentence writing as a consequence of demonstrating disrespect to a teacher
- Copying pages from a dictionary as a consequence of failing to turn work in on time
- Running laps as a consequence of being tardy for gym class
- "Wearing" gum on your nose as a consequence of chewing gum in school
- Spanking as a consequence of talking back to a teacher
- Standing in a corner as a consequence of not listening in class

We hope you recognize all of the preceding punishments as obvious nonexamples of logical consequences. We remind you that just because an intervention appears to work—at least for the moment—that doesn't make it appropriate. Illogical consequences work for the wrong reasons! And it certainly is illogical to use intended learning outcomes as forms of punishment.

Goodness of Fit

Teachers' instructional guidance approaches, educational philosophies, and leadership styles—along with their school's culture and organizational environment—are key variables that directly affect the teaching/learning process. In addition to affecting the teaching/learning process, these variables interact; that is, they affect one another. Consequently, teachers need to analyze these variables to determine their "goodness of fit." To what degree do these variables support one another and promote the same goals? To what degree do they create dissonance and represent conflicting goals? The greater their alignment or congruency, the more likely they are to contribute to the development of a positive learning environment where teachers can teach and all students can learn.

Matching Your Instructional Guidance Approach to Your Educational Philosophy

Teachers often experience role conflict in their practice and also must deal with conflicting educational goals. However, teachers can reduce some of the conflict in their professional lives by ensuring that there's no conflict between their approaches to instructional guidance and their beliefs about teaching and learning.

For example, if teachers ascribe to best-practice principles, then they view learning as a collaborative, social, democratic process. This implies that they would involve their students in making decisions regarding their own learning and learning environment—including establishing routines and procedures, organizing the learning environment, and making classroom rules.

If teachers believe that every learner possesses unique experiences and schemata, that every learner has different instructional needs, and that every learner has specific learning styles and preferences, what implications do those beliefs hold for their instructional guidance approach? What happens to notions of "group punishment" when teachers don't know exactly who the "perpetrator" was, when one consequence fits all, and when no special considerations are given when there are special circumstances?

Matching Your Instructional Guidance Approach to Your Leadership Style

In Chapter 3, we invited you to think of yourself as a leader and informed decision maker, and we presented three leadership skills and four leadership roles. Now we invite you to consider how you will apply interpersonal, technical, and conceptual leadership skills in developing your approach to instructional guidance and how you will apply the leadership roles of organizing, planning, motivating, and ensuring quality in implementing that approach.

■ Instructional Guidance Approaches and School Culture

For example, how will your leadership style and interpersonal skills influence your instructional guidance approach in the context of your school's culture? If a school proclaims that it's learner-centered, then positive student-teacher relationships must be hallmarks of its instructional guidance system. Without positive student-teacher relationships, teachers often resort to what they know about "managing" student behavior and to what was "done to them" as students—attempts to control their behavior (Dollard, Christensen, Colucci, & Epanchin, 1996). However, sometimes students don't know how to form caring relationships with others, because a crucial prerequisite to learning to form relationships and caring for others is being cared for oneself. Consequently, taking the lead in developing relationships with students becomes an instructional guidance role for teachers (Noddings, 1992). What happens when teachers are uncertain about how to form caring relationships with their students?

■ Instructional Guidance Approaches and Diversity-Based Conflict

Teachers can begin to cope with diversity-based conflict by increasing their own cultural awareness and knowledge, recognizing their own biases, and reflecting on their own backgrounds and experiences. For example, a preservice teacher who recognized that she had limited experiences with minority stu-

New teachers talk

During the course of an instructional activity, a seventh grader engages in off-task, disruptive behavior. You've already attempted to redirect her attention, but she has been nonresponsive. Therefore, you ask her to remove herself from the classroom. She clearly indicates to you that she's not going. The next voice you hear is one that vaguely resembles your own, except that it's higher pitched and louder than you remember your voice being. This voice intones, "You have a choice. You can leave, or I will help you leave." The student sits at her desk and does not move. What do you do now?

"Helping" the student leave the classroom implies to me some sort of physical assistance. I would never physically move a seventh grader who is sitting in her desk like a lump. Therefore, I wouldn't give her the choice of moving herself or having me help her. Instead, I would give her the choice of moving herself or receiving a consequence, such as a detention. In a seventh-grade classroom, I would have clearly stated rules and consequences that we would create as a class at the beginning of the year. These would be posted in the room. Therefore, the consequences should be no surprise when a rule is not followed. The rule that might be broken in this case is not following the teacher's directions.

—SHANNON, a Novice Teacher

Authors' Analysis:

Shannon's response acknowledges the danger inherent in making threats—even when those threats are

dents chose to focus her Professional Development Plan on expanding her experiences with minority students by visiting a variety of schools, observing at those schools, and interacting with teachers and students at those schools.

Teachers also need to help their students increase their cultural awareness, recognize their biases, and reflect on their background. Increased understanding of oneself generally leads to increased communication with others. Communication and collaboration are effective techniques for dealing with conflict. Cop-outs, cave-ins, confrontation, and compromise are less effective strategies (Scott, Gargan, & Zakierski, 1997).

Finding Your Leading and Teaching Voice

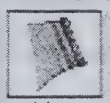
Just as writers are encouraged to find their own unique style or voice, we encourage you to take the time and have the patience to discover and develop your own teaching voice. You might attempt to emulate some of your former teachers and apply some of the behaviors and attitudes you saw reflected in their teaching, but before you can succeed in that attempt you must first personalize the strategies and techniques those teachers used. You must make them your own; you must find your own voice.

framed as choices. However, when teachers react to students in anger, fail to predict student behavior, or neglect to think through consequences in advance, they sometimes find themselves in positions similar to the one described in this scenario. They may then feel the need to engage in face-saving behavior if they feel students are challenging their authority. As Shannon suggests, the preferred approach to this situation is for the teacher to avoid a public confrontation by clearly communicating expectations and consequences.

Now It's Your Turn

What would you do if you found yourself in this situation? Would you

a. Pray for guidance from above, even though it's a public school?
b. Announce a pop quiz?
c. Announce that you have a headache and you need to go to the nurse's office to lie down?
d. Direct the student to write the following sentence on the board one hundred times: "I will not frighten and intimidate the student teacher anymore"?
e. None of the above



Confident that you have selected the last option from the choices provided, we now ask you to describe in your teaching journal how you would deal with the situation Shannon confronted.

Interaction Style

Although some teachers are quick to personalize their practice, others find the process of discovering their teaching voices more protracted and arduous. Your leadership style, organizational style, teaching philosophy, and approach to instructional guidance all will make major contributions to the development of your own unique teaching voice.

However, regardless of their individual style preferences, all teachers need to model appropriate behaviors for learners and exhibit characteristics and attitudes that exemplify effective interpersonal skills. Three basics of effective interpersonal interaction follow (Eaton, 1997):

1. Position yourself so you can comfortably look students in the eye. For young children, this means getting down to their level when speaking to them (by squatting or sitting in a chair). For adolescents, this may mean standing up if they are standing up.
2. Use students' names to help get and keep their attention.
3. Remain focused on learners when speaking to them and maintain eye contact, even though a group of twenty-five students offers many possibilities for distractions.

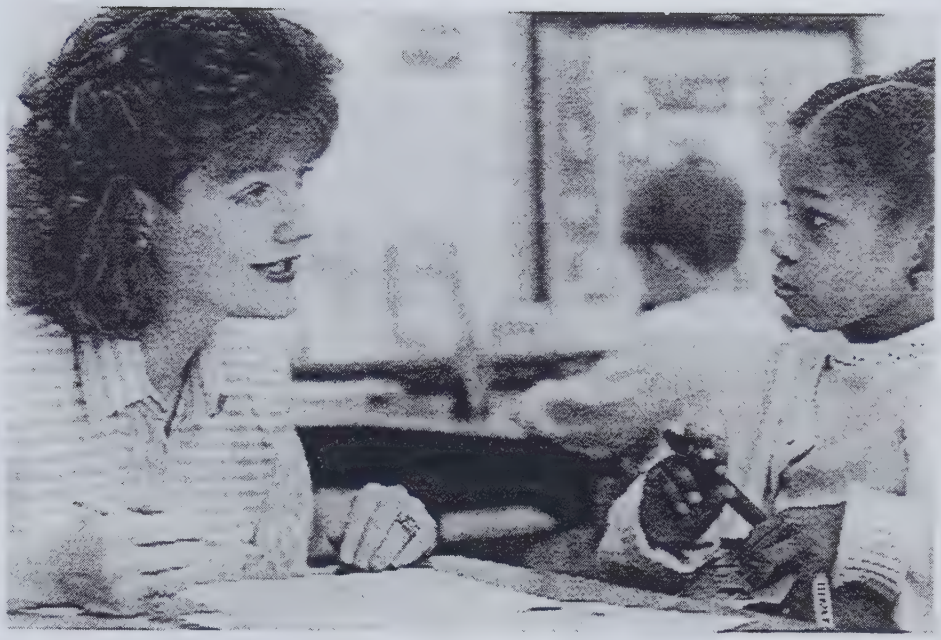
A group of experienced teachers suggested the following guidelines for building effective relations with students and modeling effective interpersonal skills for them (Prosise, 1996):

1. Be fair to all students.
2. Be consistent.
3. Listen.
4. Respect students.
5. Share feelings.
6. Don't take negative behavior personally.
7. Have a sense of humor.

Appropriate Use of Humor

Speaking of humor, every teacher could benefit from reflecting on Henry Ward Beecher's observation that "A person without a sense of humor is like a wagon without springs, jolted by every pebble in the road." The appropriate use of humor can function as a powerful and productive tool in the teaching/learning process (Dardick, 1990). It can reduce tension, increase motivation, and strengthen teacher-student relationships (Rareshide, 1993). Used appropriately, humor also can improve morale, alleviate stress, diffuse conflict, clarify a point, help students remember important information, encourage creativity, and present different points of view.

However, humor in the form of embarrassment, sarcasm, and ridicule is destructive and inappropriate (Wallinger, 1997). Remember—just because it works temporarily doesn't mean it's appropriate.



Remain focused on learners when speaking to them and position yourself so that you can maintain eye contact with them.
(© Joel Gordon)

You Make the Call—Again

We're sure you remember those teachers whom you thought treated you fairly, as well as those teachers whom you thought treated you unfairly. We're just as sure that your students also will remember particular teachers for treating them fairly or unfairly. Consequently, we conclude this chapter by reminding you of some things you already know about effective instructional guidance and organizational stuctures. Remember: The affective dimension pervades all aspects of the teaching/learning process. Effective teachers establish cultures of productivity that enable all members of the learning community to succeed. Learning environments characterized by physical safety, a positive social-emotional climate, encouragement of intelligent risk taking, and the expectation that mistakes are a natural part of the learning process facilitate both the comfort and the achievement levels students experience.

Finally, we ask you to reflect on how you can use what you know about effective instructional guidance and organizational structures to inform the decisions you make. For example, how would you now respond to the scenarios presented at the beginning of this chapter? Before proceeding to the next item on your extended list of things to do, please take the time to revisit your original responses to those four scenarios, reevaluate your responses, and decide if you'd like to modify any of your original responses.

Summarizing What You've Learned

- Instructional guidance involves teachers in creating positive learning environments that are developmentally appropriate and culturally responsive; helping students learn from their mistakes rather than punishing them for their mistakes; empowering learners to solve problems rather than punishing them for having problems they can't solve; and helping learners accept consequences, but consequences that leave learners' self-esteem intact.
- Approaches to instructional guidance range along a continuum from teacher-centered approaches to learner-centered approaches. The traditional model, behavior modification model, assertive discipline model, and effective momentum management model are representative of teacher-centered approaches. The reality therapy model serves as a bridge between the teacher-centered and learner-centered approaches. Its emphasis on learner responsibility leads to more learner-centered approaches, which include positive discipline, teacher effectiveness training, responsible classroom management, and Kohn's theory of community.
- Organizational structures—how teachers organize people, time, space, resources, curricula, and materials—directly affect learner success.
- Grouping strategies (that is, having students work as a whole class, in small groups, in pairs, or individually) are one type of organizational structure. They can either advance or impede learners' attainment of instructional objectives, depending on how well they are matched to those objectives.
- Schedules serve as an extension of teachers' philosophies and perspectives on the teaching/learning process.
- Procedures and routines serve legitimate purposes as features of organizational structures. They provide some of the reliability most learners need to feel comfortable and to be productive.
- Rules function as effective organizational structures when they enable teachers to do their best at teaching and students to do their best at learning (Cangelosi, 1990).
- Teachers' instructional guidance approaches, educational philosophies, and leadership styles—along with their school's culture and organizational environment—are key variables that directly affect the teaching/learning process.
- It's important to take the time to discover and develop your own teaching voice. Your leadership style, organizational style, teaching philosophy, and approach to instructional guidance all will make major contributions to the development of your own unique teaching voice.
- The appropriate use of humor can contribute to the development of your teaching voice and can function as a powerful and productive tool in the teaching/learning process.

YOUR PROFESSIONAL TEACHING PORTFOLIO

- Develop three to five rules that you believe are relevant and critical to any productive learning environment. Explain what contribution each of your rules makes to the teaching/learning process.
- Describe your preferred instructional guidance approach, and explain how it complements your educational philosophy and leadership style and reflects your teaching voice.

Key Terms

Assertive discipline
Behavior modification
Collaborative rule making
Collaborative scheduling
Community model
Effective momentum management
Group investigation
Individualized instruction
Interest groups
Instructional guidance
Jigsaw groups
Literature circles
Logical consequences
Natural consequences
Organizational structures
Peer response and editing groups
Positive discipline
Reality therapy
Responsible classroom management
Self-monitoring
Self-control
Skills groups
Teacher effectiveness training
Traditional model

Relevant Resources for Professionals

Books and Articles

- Daniels, H., & Bizar, M. (1998). *Methods that matter: Six structures for best practice classrooms*. York, ME: Stenhouse Publishers.
- Eaton, M. (1997). Positive discipline: Fostering the self-esteem of young children. *Young Children, 52*(6), 43–46.
- Scott, C. C., Gargan, A. M., & Zakierski, M. M. (1997). *Managing diversity-based conflicts among children: Fastback 414*. Bloomington, IN: Phi Delta Kappa Educational Foundation.
- Wallinger, L. M. (1997). Don't smile before Christmas: The role of humor in education. *The National Association of Secondary School Principals Bulletin, 81*(589), 27–34.

Professional Journals in Education

- *Learning Environments Research*
  Kluwer Academic Publishers, Spuiboulevard 50, P.O. Box 17, 3300 AA Dordrecht, The Netherlands
  www.wkap.nl/journalhome.htm/1387-1579

Websites

- **Teachers Helping Teachers.** This website offers a format for teachers to exchange ideas and suggestions for instructional strategies, activities, and lesson plans.
  www.pacificnet.net/~mandel/
- **Teachers.Net.** This Web site provides an on-line reference desk, an active chat board, and a lesson plan exchange.
  www.teachers.net/

6 Instructional Strategies and Approaches

THIS CHAPTER

- Analyzes why teachers need a variety of instructional approaches
- Describes the contributions schema theory, constructivism, and metacognition can make to teachers' decisions regarding which instructional strategies to use in particular situations
- Compares and contrasts critical and creative thinking
- Determines the variables teachers need to consider in selecting instructional approaches for particular teaching/ learning situations
- Identifies characteristics of effective instructional approaches
- Describes different instructional strategies and appropriate applications
- Provides examples of the different instructional purposes of questions
- Develops a plan for helping students use question-and-answer relationships to better understand what they read
- Identifies the features of effective question-asking strategies

— OR —

If the only tool you have is a hammer, you see everything as a nail.

Why Use a Variety of Instructional Approaches?

Imagine what would happen if as a teacher you only had one instructional strategy—one tool—to help learners acquire new skills or content. No matter what the situation was, who your students were, or what your students needed, your response would be the same. What would happen if your students failed to learn via the one tool you had to use? What would you do then? For your "Plan B" would you resort to the MOTS approach (more of the same) or perhaps the LAS approach (louder and slower)? Would those be your only two choices? If you allowed your current knowledge and skill base to limit your options, then yes, these would be your only choices. However, we're hopeful that you would assume the role of educational leader, informed decision maker, and lifelong learner and make it your goal to find other options and learn how to use them. That is, you would learn a variety of instructional approaches and acquire the knowledge and skills needed to effectively apply them in appropriate situations. We're also hopeful that you would never find yourself in this situation because you recognize the importance of responding to a variety of learners, learner needs, and learning situations with a variety of instructional approaches and strategies.

Reflect Respond

"There are many different ways of understanding . . . and, correspondingly, many different ways of teaching to understand."

—Passmore, 1982, p. 210

Reflect on the various teachers you've had and the different strategies and approaches they've used to help you learn. Which approaches did you most enjoy? What strategies seemed most effective at helping you learn and remember information, concepts, and skills? What do you think made those strategies effective for you?

In your teaching journal, describe two or three different instructional strategies that benefited you as a learner. Then speculate about why those particular teaching approaches worked for you.

Abraham Maslow, whose name you likely know in connection with his hierarchy of needs, is credited with the notion that if the only tool people have is a hammer, they tend to see and respond to everything as if it were a nail. Such a limited view leads to what we refer to as "high-impact maintenance," which can prove effective in certain situations (hammering down a loose nail on a deck) but disastrous in others (hammering on the television set in an attempt to adjust the horizontal hold). But what does Maslow's severely limited tool supply have to do with instructional strategies and approaches?

As a learner, what instructional strategies and approaches did you most enjoy?
(© Joel Gordon)

Different Strategies for Different Learners

In Chapter 5, you read about the importance of family involvement and how it begins with teachers' acknowledging and responding to the diversity of learners and their families. As you know, diversity comes in a variety of forms, including racial, ethnic, religious, linguistic, social, and economic diversity as well as diversity resulting from disabilities and special learning needs. In Chapter 8, you read about a number of variables that affect curricular development and decision making. In addition to learner diversity, those variables include learners' prior knowledge and schemata, multiple intelligences, developmentally and culturally appropriate practice, and different learning styles. Just as these variables affect curricular development and decision making, they also affect decisions regarding instructional strategies and approaches. Teachers must inform their decisions about which teaching tools and techniques to use with knowledge related to individual learners and diverse learning needs. They also must consider learners' prior knowledge and experiences so they can effectively connect what learners already know and can do with the new knowledge and skills they are learning.

Different Strategies for Different Types of Learning

In deciding what instructional strategies and approaches to implement, teachers also must consider the kind of knowledge they are attempting to help students learn, because people learn different types of knowledge in different ways. Consequently, attempts to acquire different types of knowledge benefit from different types of teaching strategies, just as different carpentry tasks require different tools.

■ Declarative, Procedural, and Conditional Knowledge

Declarative knowledge is knowledge about something, and **procedural knowledge** is knowledge about how to do something. **Conditional knowledge** is knowledge about when and why to use particular examples of declarative or procedural knowledge, that is, knowing when to apply knowledge appropriately. Identifying and describing five different instructional strategies is an example of declarative knowledge, appropriately implementing a particular teaching approach is an example of procedural knowledge, and knowing when and why to apply a particular instructional strategy in a particular teaching/learning situation is an example of conditional knowledge. By the way, these examples also describe the learning outcomes we have in mind as we write this chapter. Table 6.1 provides more examples of the three different kinds of knowledge.

Role of Metacognition

Simply defined, **metacognition** is thinking about thinking. Learners engage in metacognition when they think about their own thinking processes and choose learning strategies that are appropriate for specific tasks. Metacognition has two main components. The first component is knowledge about cogni-

Table 6.1
Kinds of Knowledge

Declarative Knowledge	Procedural Knowledge	Conditional Knowledge
Knowing about something	*Knowing how to do something*	*Knowing when and why to use particular knowledge*
The parts of a bike	How to ride a bike	When to pedal, coast, or brake
Addition and subtraction are inverse operations	How to add and subtract	When to use which mathematical operation
Music expresses emotions	How to use different objects to create music	What types of objects create sounds that express particular emotions
Many people speak Spanish	How to speak Spanish	When to use knowledge of Spanish
The Internet provides access to a wealth of information	How to use the Internet	What types of information to access and which uses of that information are ethical

tion—the information and understanding learners have of their own thinking processes and their knowledge of various learning strategies to use in particular learning situations. Perhaps you recognize this as declarative knowledge, or knowledge about something. The second component of metacognition is cognitive monitoring—learners' ability to select, use, and monitor learning strategies that complement their learning styles and the specific situation. Perhaps you recognize this as a combination of procedural and conditional knowledge, inasmuch as learners must know how to use learning strategies and then know when and why to use particular strategies (Arends, 1998).

What is the significance of metacognition? It enables learners to monitor their own learning, analyze their own miscues, and make their own predictions. Learners who can effectively do these things can take more responsibility for their own learning. Once they're aware of their cognitive style and the different ways they approach different tasks, they can use that information to make decisions about how to structure and organize future learning situations.

Teachers can use think-alouds to model metacognitive strategies. In Chapter 2, we used think-alouds to walk you through the process of creating a professional development plan. Use that experience as an example of how to apply the think-aloud concept to a specific process consisting of a number of discrete steps. As their name implies, think-alouds consist of learners' thinking out loud about the thinking they're doing at the time. If you wanted to model for students how to approach a complex task or problem, you could use the think-aloud method to provide a running monologue that described the different thinking strategies you used to address the problem and the sequence in which you implemented those strategies. (It also would be important to explain why you used those particular strategies and why you sequenced them as you did.)

In addition, you could help your students learn to use think-alouds as a way to monitor their own thinking. This also would provide you with a window into students' thinking processes, allowing you to do the following: assess their ability to appropriately apply various thinking strategies, analyze their miscues, identify faulty information, and detect erroneous connections in their thinking.

Thinking Strategies

Besides metacognition, there are other types of thinking, including critical thinking, creative thinking, and productive thinking. Teachers who facilitate their students' thinking create learning environments that encourage thoughtfulness by facilitating debate and discussion of different viewpoints. They provide learners with opportunities to plan and witness the consequences of their activities, design learning opportunities that require experimentation, ask learners to reflect on their work in written logs or journals, and encourage learners to think aloud while demonstrating their understanding. Teachers who facilitate their students' thinking also use cooperative learning strategies that require learners to exchange information and viewpoints (Duis, 1995). (Later in this chapter we'll focus on the application of cooperative learning as an instructional strategy.)

There are two main phases in the development of most new ideas: the germinal phase and the practical phase. During the **germinal phase,** ideas are generated and manipulated—they sprout. This type of soft, divergent thinking is known as **creative thinking.** During the **practical phase** ideas are evaluated and implemented—they are harvested. This type of hard, convergent thinking is known as **critical thinking** (von Oech, 1983). Both creative and critical thinking play crucial roles in cognition—one is not better or more worthwhile than the other. When used appropriately, each has an important contribution to make to the teaching/learning process and to the development of new ideas.

Creative Thinking

Emile Chartier, a prominent philosopher, once reflected that "Nothing is more dangerous than an idea when it is the only one you have" (quoted in von Oech, 1986, p. 78). Unfortunately, we've all had ample opportunity to witness the truth in this statement. People who believe they have no other viable options sometimes resort to violence or substance abuse to "solve" their problems. People who don't take the time or make the effort to consider alternative perspectives and viewpoints only see one way to do things.

Some people have suggested that the degree to which individuals use their creativity and imagination is inversely proportional to the amount of punishment they believe they'll receive for using them (von Oech, 1983). What applications does this notion have to schools? Why is it that, historically, schools and those who have peopled them often have placed great emphasis and value on finding "the one right answer" and conformity? Although it's true that

many questions do have just one right answer (such as "What's the capital of Illinois?" or "What's two plus two?"), many other questions have a variety of possible answers and require innovation and different ways of thinking. In fact, most of life's important questions don't have just one right answer ("How can we break the cycle of child abuse?" and "How can we feed the hungry?"). Attempts to address such questions benefit from multiple perspectives and multiple approaches. Picasso observed that "Every child is an artist. The problem is how to remain an artist after he grows up" (von Oech, 1986, p. 78). That is a challenge that faces schools and that would benefit from creative thinking that incorporates multiple perspectives and multiple approaches.

Multiple perspectives certainly exist when it comes to defining creative thinking. As stated above, creative thinking may be described as the germinal, divergent phase of thinking. **Divergent thinking** is the process of generating ideas, making new connections, perceiving gaps, and identifying paradoxes. It's looking at the same things many other people have looked at before but seeing those things in different ways. Divergent or creative thinking also is imagining many new and unusual possibilities, thinking and experiencing in varied ways, considering different viewpoints, and elaborating on alternatives (Isaksen, Dorval, & Treffinger, 1994). In the following sections, we highlight two creative thinking strategies.

■ Scamper

Rudolph Flesch suggested that "Creative thinking may simply mean the realization that there's no particular virtue in doing things the way they have always been done" (quoted in von Oech, 1986, p. 78). So much for the creativity-killing excuse "But we've always done it this way." One strategy for attempting to climb out of such mental ruts is known by the acronym SCAMPER (Eberle, 1971). As Figure 6.1 indicates, the letters of the acronym stand for *S*ubstitute; *C*ombine; *A*dapt; *M*odify, magnify, minify; *P*ut to other uses; *E*liminate; and *R*everse and rearrange. The SCAMPER technique can be put to many uses. Consider the many ways that people have found to *reverse* the process of "going to the store" and instead have the store "go to the customer" (such as mail order, Web pages, and telemarketing). Think about the many inventions that are the product of *combining* two or more items (clock radio, telephones with built-in answering machines). List some of the innovations that *minifying* existing products has generated (transistors and smaller televisions and radios, microchips and microcomputers, optic fibers and communication technology, medical technology and arthroscopic surgery). We're confident you can add to this very brief list of the many innovations SCAMPERing has produced.

■ Brainstorming

Brainstorming is a creative thinking strategy that you probably have used, even if you didn't call it brainstorming. Utilized appropriately, it can facilitate the idea generation process. Since people often are familiar with brainstorming, they have many different notions of what it is and how to do it. For that reason, when we use brainstorming with learners—whether adults or younger

Figure 6.1
Scamper

S **SUBSTITUTE**
What could you substitute?
What might you do instead?
What would do as well or better?

C **COMBINE**
What could you combine?
What might work well together?
What could be brought together?

A **ADAPT**
What could be adjusted to suit a particular purpose or condition?
How could you make it fit?

M **MODIFY, MAGNIFY, MINIFY**
What would happen if you changed the form, composition, or quality?
Could you make it larger, greater, or stronger?
Could you make it smaller, lighter, or slower?

P **PUT TO OTHER USES**
How could you use it for a different purpose?
What are some new ways to apply it?
What does it suggest?

E **ELIMINATE**
What could you subtract or take away?
What could you do without?

R **REVERSE, REARRANGE**
What would you have if you reversed it or turned it around?
Could you change the parts, order, layout, or sequence?

(Eberle, 1971)

learners—we take the time to review the guidelines for brainstorming. That way we're assured that everyone has some level of shared understanding regarding the purpose and process of brainstorming. Here are the brainstorming guidelines we use:

1. *Produce many ideas.* This is the principal idea behind brainstorming. The purpose of brainstorming is to think of as many ideas as you can relating to a particular topic. Even if you don't think an idea is very creative, say it anyway. We sometimes refer to the process of getting past your first twenty to twenty-five ideas, which often are quite common, as "draining your brain of purple monkeys." If someone tells you *not* to think about purple monkeys, the first thing you have to do is think about purple monkeys. By the same token, if you tell yourself not to think of a common idea that comes to mind first, you'll likely find yourself thinking it. Instead, get rid of it by saying it or writing it down.
2. *Produce unusual ideas.* Once you've gotten past your "purple monkeys," you can begin to generate ideas that are a bit more original, unique, and

novel. Remember that different and weird ideas are good. Humor and playfulness often facilitate the creation of unusual ideas.

3. *Hitch a ride on other ideas.* We're not advocating academic dishonesty, as in stealing other people's work. However, we are encouraging you to build on existing ideas, whether yours or someone else's. With younger students, we typically explain that hitching a ride or piggybacking on other people's ideas is not copying or cheating but an effective way of thinking of more ideas.
4. *Defer judgment.* Brainstorming is definitely not the time to form a "yeah-but committee." Judging and evaluating the worth of ideas at this stage interferes with the purpose of brainstorming, which is the production of many ideas—regardless of their quality. Wait until later to tell other group members why their ideas won't work or why your idea is the greatest discovery since electricity. And even if you want to tell people how great you think their ideas are, wait until later. Deferring judgment means you wait until later to judge both the merits and the "demerits" of ideas.
5. *Stay on task.* This guideline tends to be more difficult for adults to follow than for younger learners. Off-task talk gets in the way of producing relevant ideas. Brainstorming is not the appropriate time for analyzing the economy, examining the pros and cons of daylight savings time, discussing what you did last night or your plans for tonight, or engaging in other conversation unrelated to the brainstorming topic.

As with any other procedure, teachers must take the time to teach students the proper process for brainstorming. Protesting that students "just can't handle working in groups" is an unconvincing excuse for choosing not to make use of brainstorming. We have found brainstorming to be an effective and efficient way of administering a friendly form of preassessment and of determining learners' interests when selecting themes for future integrated units. Of course, students also can use brainstorming to generate possible topics for research and writing, solutions to self-selected problems, and ideas for presenting the results of their research and problem solving. Brainstorming applications are limited only by your imagination.

Creative thinking thrives in an environment that rewards risk taking, curiosity, and imagination. Brainstorming also can serve to bolster the self-confidence of learners, once they believe that there truly is no one right answer during brainstorming sessions and that, in fact, all responses are accepted.

Critical Thinking

Critical thinking is a form of convergent thinking that seeks a single response or the most acceptable solution (Lyman, Foyle, & Azwell, 1993). Whereas creative thinking is the germinal phase of idea generation, critical thinking is the practical phase, when ideas are "harvested" (that is, evaluated and implemented). It includes the processes of analyzing, categorizing, comparing, contrasting, refining, developing, and selecting ideas. Critical thinking also involves examin-

ing arguments and assumptions, reaching and evaluating inferences and deductions, setting priorities, and making decisions (Isaksen, Doral, & Treffinger, 1994).

■ Bloom's Taxonomy

Many different taxonomies have been developed for critical thinking. Arguably, the most well known of these classification systems is Bloom's Taxonomy (Bloom, 1956), which consists of six categories or levels: knowledge, comprehension, application, analysis, synthesis, and evaluation (see Table 6.2). Because Bloom's Taxonomy is a hierarchy, the implication is that when learners engage in a thinking strategy that appears at the top of the hierarchy, they are able to do so because they also are using all of the thinking strategies below or preceding it. Therefore, all levels of the taxonomy are important and essential components of critical thinking. However, analyses of curriculum guides, instructional plans, and the actual teaching that occurs in classrooms often reveal that as much as 80 percent of instructional time is spent at the knowledge and comprehension levels, which are the two lowest levels of Bloom's Taxonomy.

Although knowing and understanding information is an essential starting point, it's not where learning should end. Learners also must have opportunities to apply what they know, to analyze and synthesize information, and to evaluate their own work and that of others. With that clarification in mind, consider the definitions and examples of the six levels of Bloom's Taxonomy that appear in Table 6.2. The examples we provide relate to the book *A House Is a House for Me* (Hoberman, 1978), which we have used with a variety of learners, ranging from primary students to adults. We often use this book to illustrate how Bloom's Taxonomy can serve as a tool by which teachers can provide curricular adaptations to accommodate a wide variety of learners' diverse schemata and prior experiences.

Productive Thinking

Productive thinking is a combination of creative and critical thinking; therefore it includes both divergent and convergent, soft and hard, germinal and practical thinking. To take ideas from germination to fruition requires engaging in the following four main roles (von Oech, 1986, p. 16):

1. When you're searching for new information, be an Explorer.
2. When you're turning your resources into new ideas, be an Artist.
3. When you're evaluating the merits of an idea, be a Judge.
4. When you're carrying your idea into action, be a Warrior.

The Explorer and Artist roles primarily involve creative or divergent thinking, whereas the Judge and Warrior roles require critical or convergent thinking.

Productive thinking consists of five different components—**fluency, flexibility, originality, elaboration,** and **evaluation**—which you can find

Table 6.2
Bloom's Taxonomy: Levels, Definitions, and Examples

Level and Definition	Example
KNOWLEDGE: Remembering previously learned materials; recognition and recall.	*Identify three types of traditional Native American dwellings.*
COMPREHENSION: Grasping the meaning of the knowledge being learned; translating information into your own words.	*How are animals' homes an example of adaptation?*
APPLICATION: Using learned materials in new situations and real-life circumstances.	*In what ways could mathematical concepts and skills help you build a house?*
ANALYSIS: Breaking down information or material into its elements or parts so that its organizational structure may be understood.	*Compare and contrast the housing and shelter needs of Bedouin nomads and Eskimos.*
SYNTHESIS: Putting separate parts together to form a new whole; taking information from various sources and creating a new whole.	*Design a house that is friendly to the environment.*
EVALUATION: Judging the value of material or information for a given purpose, with judgments based on predetermined criteria or standards.	*When considering the issue of endangered species, whose housing rights are more important to consider—animals or humans? Provide a rationale to support your answer.*

(Bloom, 1956)

embedded in the Explorer, Artist, Judge, and Warrior roles. Definitions and examples of these five components, again based on *A House Is a House for Me,* appear in Table 6.3. Young and old learners alike can learn the different components of productive thinking and how to use them. Teachers who make it a point to label the kind of thinking being used for a particular task facilitate students' attempts to learn the components, their definitions, and their appropriate applications.

Under what situations are you the most creative? What variables or conditions increase your creativity? What variables or conditions inhibit it?

In your teaching journal, make two lists. In one list, record variables, factors, or conditions that get in the way of your creativity. In the other list, record variables, factors, or conditions that tend to increase your creativity. Then, using your knowledge of creativity inhibitors and facilitators, describe strategies you might employ to create a learning environment that will support your future students' attempts at creative idea production.

Table 6.3
Components of Productive Thinking

Component and Definition	Example
FLUENCY: Generating many possibilities or producing lots of ideas. Quantity is valued over quality.	*Name all the things that come to mind when you think about houses.*
FLEXIBILITY: Seeing things from a different point of view or breaking away from habitual patterns of thought.	*Illustrate or describe your house. Then do it again, only this time from an ant's perspective.*
ORIGINALITY: Seeing in a unique way or thinking in a new or novel pattern.	*Name all the things you can think of that are houses for other things.*
ELABORATION: Augmenting or modifying an idea with more information in order to improve it.	*Using the pattern Hoberman employs in her book* A House Is a House for Me, *write your own "house" book. Or, design the house or habitat that would be ideal for you.*
EVALUATION: Judging the worth of an idea, based on predetermined criteria or standards.	*Select the two best ideas from your group's list of things that can be houses for other things. Before you do this, determine the criteria the group will use to decide which ideas are the best ones.*

Choosing Instructional Strategies and Approaches

Different types of learners and learning require the use of an array of instructional strategies. A number of studies and researchers have underscored the need for a variety of approaches (such as Clark, 1993; Dunn, 1996; Ragan & Smith, 1994).

Using a Variety of Approaches and Strategies

In making decisions regarding the selection of instructional approaches, teachers must remember that models of teaching aren't fixed, inflexible, immutable formulas for teaching. Neither do learners have fixed learning styles that don't change or grow. Teaching models and methods thus possess significant flexibility, just as students possess great learning capacities and adaptability. It's okay to take learners outside of their comfort zones sometimes for the purpose of introducing them to different styles and different ways of knowing. Just remind yourself to "stretch but not break" (Joyce, Weil, & Calhoun, 2000).

Having said that, we must hasten to add that "goodness of fit" is a critical criterion to consider in choosing instructional strategies and approaches. In addition to being developmentally and culturally appropriate for the learners they're designed to help, instructional approaches must be appropriate for the kinds of knowing (such as declarative, procedural, conditional) that the

instructional objectives involve. Teachers also must use assessment strategies that are appropriate for both the instructional objectives and the instructional strategies used. Finally, teachers must select and employ organizational structures (such as appropriate learning environments, room arrangements, procedures) that complement and facilitate the instructional approaches they choose to apply.

Designing Learning Activities That Are Both Fun and Functional

Fun is relative and situational. What one person finds funny and humorous, someone else may not, and what's funny today might not be funny tomorrow. Fun also is a voluntary experience. To experience fun and find something humorous, individuals must consciously or unconsciously perceive a situation as enjoyable. Fun can serve as an intrinsic motivator, inasmuch as people tend to seek pleasure and avoid pain. It can allow learners to try new things without fear of making mistakes, looking silly, or feeling awkward (Bisson & Luckner, 1996).

Consequently, fun should be a part of the natural learning process. When playing and having fun, learners tend to lose social inhibitions. Fun and play can eliminate factors that inhibit socialization. Fun can set free the inner self, allowing learners to try new things, trust others, keep trying, be more creative, and take emotional risks. It also can reduce stress and help learners relax. Fun produces positive effects on the teaching/learning process and serves as a powerful tool for enhancing a motivating and safe learning environment (Bisson & Luckner, 1996).

Humor and laughter help relieve tension, make learning more human, reduce learners' fears and anxieties, increase student interaction and participation, make the learning environment more enjoyable, and are essential for emotional health and well-being. Humor also can serve as a powerful tool for productive classroom communication and can help capture and keep students' attention. People tend to remember humorous incidents better than others, which suggests that humor can maximize students' recall in instructional situations, particularly when the humor is spontaneous and is relevant to the topic being taught (Carlson & Peterson, 1995; Dickmeyer, 1993).

Teachers are crucial to the presence of humor in the classroom and are key to creating learning environments in which it can flourish. Teachers must model constructive, appropriate uses of humor and acknowledge students for appropriate uses of humor (Bergen, 1992; Carlson & Peterson, 1995). Teachers who model and value appropriate uses of humor use a variety of strategies to foster enjoyable and humorous approaches to the teaching/learning process. For example, they display playfulness, take risks, try out new behaviors, acknowledge and laugh at their own mistakes, are open to learners' ideas, and communicate the message that learning can be fun, even though it requires hard work and persistence. Teachers can use the following strategies to link humor and learning (Bergen, 1992):

- The *performance strategy* involves modeling humor in the direct instructional role to help hold learners' interest and to contribute to a warm, comfortable learning environment. For example, teachers can read books or poems that include incongruous language, settings, characters, or actions. They also can share humorous anecdotes that relate to the topic or task they're presenting.
- The *indirect facilitation strategy* involves teachers encouraging humor by selecting instructional materials that provide opportunities for learners to express humor and then ensuring that learners have time to use those materials. Books of limericks, poems, or puns can serve this purpose, as can stories that encourage sound and word play (such as Delacorte and Witte's *The Book of Terns,* 1978; Fleischman's *Joyful Noise,* 1988; Parish's *Amelia Bedelia,* 1963). In fact, the use of humor in literature contributes to three categories of reading skills: discerning the author's purpose, making inferences, and evaluating content (Carlson & Peterson, 1995). Kids love books that incorporate humor. Consider, for example, the popularity of Dr. Seuss's many books, including his classic *The Cat in the Hat* (1957); Silverstein's poetry books, such as *Where the Sidewalk Ends* (1974) and *A Light in the Attic* (1981); and Scieszka's *The Stinky Cheese Man and Other Fairly Stupid Tales* (1992) and *Math Curse* (1995).
- The *eliciting strategy* involves teachers explicitly eliciting learners' humor. They can do this by asking learners to share riddles or jokes (socially appropriate ones, of course) or to describe funny things that have happened to them. Teachers also can ask learners questions that cause them to reflect on why they laugh at the things they do. Such focused reflection can help students learn more about the cognitive processes that underlie humor. This strategy, of asking learners to reflect on and think about their responses to and uses of humor, is actually a variation on metacognition.
- The *respondent strategy* involves teachers simply being appreciative of and responsive to learners' attempts to use humor appropriately. Teachers can encourage students to elaborate on their humorous ideas or creative stories; convey the message that they value humor, by listening attentively and appreciatively when students share humorous anecdotes; and respond playfully when students play a good-natured joke on them.

Designing and Disguising Practice That's Both Fun and Functional

Although not every minute of school (or life) can be fun, that doesn't mean teachers don't have an obligation to try to make it as fun as possible. Just as teachers can use what they know about humor and learners' responses to it in designing and implementing instructional strategies, they also can incorporate humor in activities designed to provide practice in particular skills. One of the easiest, yet most important, things teachers can do to make practicing skills more fun is to just say no to "seatwork." Even the term itself sounds boring

and painful. What it typically implies is that students sit at their tables or desks and complete worksheets (purple dittos or, more often today, blackline masters) to provide reinforcement and practice of particular concepts and skills.

However, there are better ways of providing and disguising opportunities for such practice—ways that are characterized by best-practice principles such as experiential learning, collaboration, student choice, and reflection. Of course, making practice better also means making it fun, whenever possible. Just because repetition is an inherent part of skills practice and is generally necessary to achieve *automaticity* (the point at which a skill becomes automatic and the learner doesn't have to consciously think about performing it) doesn't mean such repetition can't be embedded in a context that learners find enjoyable, or at least not painful. For example, games, books on tape, and computer software are formats that many learners find enjoyable. Since students are more likely to engage in pleasurable skills practice than in painful skills practice, disguising such practice and making it fun can increase their achievement.

Whatever the format used, certain principles should guide teachers' attempts to provide learners with skills practice. First of all, teachers should assign short, meaningful amounts of practice. Perhaps you've heard the axiom "You can never get enough practice." Yes, you can. In fact, you can get too much practice. If you've ever practiced making free throws or worked on your backhand for an extended period of time, you've experienced what too much practice can do to your concentration and what fatigue—mental or physical—can do to attempts to improve performance, form, and technique. Thus, although it's important for students to practice enough to reach the point of automaticity, it's also important to know when students have practiced enough and to distinguish between massed and distributed practice. *Massed* (or *continuous*) *practice* generally is used to learn new skills and can lead to boredom and fatigue if overused. *Distributed practice*—practice divided into segments—is most effective for refining already familiar skills (Arends, 1998).

Whatever kind of practice is being used, teachers must design practice opportunities that are relevant to the contexts in which students will be expected to use the skills they're practicing. In other words, teachers must facilitate the transfer of learning. Practice that is real and meaningful to students—that takes place in an authentic context—is more likely to facilitate learners' attempts to actually apply the skills they are practicing. For example, if the only practice students get in identifying and using dictionary guide words (the two words that appear at the top of each page, signifying the first and last words on the page) is to circle on a worksheet the words that would appear on a particular page, then the probability that they'll actually make use of guide words when attempting to locate entries in dictionaries, encyclopedias, or telephone books is quite low. However, if students' practice includes use of authentic materials and authentic tasks (such as locating particular services in the Yellow Pages or finding key social studies concept words in the dictionary), the probability that they'll learn the skill well enough to use guide words proficiently is much higher.

When assigning independent practice (that is, out-of-class work), then, teachers should ensure that students can perform the work successfully. If students are to complete the work at home, teachers also should communicate clearly to parents the level of involvement expected of them. Finally, teachers should provide timely feedback on independent practice. The following guidelines (Arends, 1998) contain important points to remember and apply as you check students' understanding and provide feedback on their skills practice, whether it is guided or independent:

1. Provide students with feedback as soon as possible after they practice.
2. Make feedback specific—both positive and negative.
3. Concentrate on behaviors rather than intent.
4. Provide developmentally appropriate feedback.
5. Emphasize praise and feedback for correct performance.
6. When giving corrective feedback, demonstrate how to perform the task correctly.
7. Help learners focus on processes rather than outcomes.
8. Teach students how to assess their own performance and provide feedback to themselves.

Characteristics of Effective Instructional Approaches

The most succinct way to summarize the characteristics of effective instructional models, strategies, and approaches is simply to say that effective instructional approaches demonstrate best-practice principles. In Chapter 4 we introduced you to thirteen best-practice principles (Figure 4.2) and urged you to use them in making decisions regarding the teaching/learning process. Here we urge you to use those same principles as criteria to guide your reflections about the strengths and limitations of various instructional approaches.

■ Authentic Instruction That Builds on Learner Interest

As several of the best-practice principles (such as student-centered, authentic, and holistic) imply, relevance is an important variable in the teaching/learning process. If something is important or relevant to students, they're more likely to actively participate and experience long-term learning. Authentic methods of instruction require learners to produce (rather than just reproduce) knowledge that is relevant to their own lives and to achieve in ways that are of value to themselves and to society (Duis, 1995; Hoover & Achilles, 1996).

However, authentic instruction and learning require time. Teachers can reprioritize their curricula and methods to find more time for authentic learning. Sometimes less is more. "Studying a few topics in depth yields greater student interest and understanding than studying many topics superficially. Teachers must practice 'selective abandonment' in pruning their curricula" (Duis, 1995, p. 3). This sometimes is referred to as the post-hole approach to teaching (Zemelman, Daniels, & Hyde, 1998), because the idea is to provide

opportunities for learners to dig deeply into a few key topics and then to help them draw connections between the "post holes" they create in the process. Deep learning is more likely to be long-term learning, as opposed to superficial learning, which barely scratches the surface.

■ Choice, Active Engagement, and Problem Solving

In today's work environment, the only constant is change. Information expands exponentially and job requirements shift capriciously, demanding flexible thinking and action on the part of workers. Employees must be able to operate effectively and productively in collegial, collaborative problem-solving teams that function independently (Short & Greer, 1993). Consequently, teachers and the learning environments they create must empower students to become independent, lifelong learners. Empowerment implies that learners have opportunities for choice, decision making, autonomy, participation, and responsibility.

In learning environments designed to facilitate learners' construction of their own knowledge, both teachers and learners have and make choices, take risks, and enjoy figuring out new things by themselves. Learners in such classrooms begin to construct important lifetime dispositions, including a sense of their own responsibility as well as concern and respect for others. They also learn that making choices means they will many times be wrong and that they can learn from their mistakes. As Piaget emphasized, learners construct the intellect by thinking through many levels of being wrong. The more responsibility for intellectual and social problem solving that teachers shift to learners, the more likely it becomes that learners will construct interpersonal and intellectual understanding (Wakefield, 1994).

The spirited give-and-take of active learning can't occur when teachers reserve all of the decision making for themselves. An appropriate role for teachers, then, rather than making choices for learners, is to encourage the exchange of viewpoints and to foster learning climates where being wrong begins, rather than ends, class discussions. Allowing learners to make choices also reveals what they're curious about, and encouraging a sense of wonder contributes to learners' intellectual stretching more than making choices for them ever could. "The opportunity to construct meaning is enhanced as the child actively seeks to resolve the intellectual tension related to his own curiosity" (Wakefield, 1994, p. 14). Piaget called this intellectual tension **disequilibrium.**

■ A Variety of Learner Response Formats

Multisensory learning gives students opportunities to create their own knowledge and is the foundation for creating conceptual understanding. Consequently, teachers must design learning environments that stimulate and facilitate learners' discovery, exploration, and understanding through a number of sensory gates. Students learn through direct experiences with real people and objects and by exploring their environment with all of their senses.

They then combine all of their sensory experiences to achieve more complex and complete schemata (Staley, 1997).

For example, if you were teaching an interdisciplinary unit on the integrating theme of houses and homes, then you would want to create opportunities for students to use all of their senses to learn concepts and skills related to that theme. If a salt marsh were the particular "home" you were focusing on, how could you help your students see, smell, taste, touch, and hear that environment?

■ Well-Integrated Curricular Components

For interdisciplinary units, a particular theme is used to integrate various curricular subjects. Successfully combining curricular components and helping learners create connections between different subjects, concepts, and issues characterize effective teaching—regardless of the particular approaches or models employed. Consequently, as you select and use instructional models, remember that combining curricular components and creating connections are goals to aim at and hit—consistently and repeatedly.

■ Culturally Responsive Strategies

Effective instructional approaches are culturally responsive and culturally relevant. That is, they include strategies designed to improve the academic performance and enhance the self-esteem of all learners, including those whose racial, ethnic, or linguistic heritage differs from those of the Anglo-European population. Culturally inclusive approaches promote harmony between different ethnic groups and increase all students' knowledge of their cultural heritage. In addition, culturally responsive instructional strategies create connections between different curricular components, are authentic, are learner centered, and are relevant to learners' real lives. Such relevance and connections can be achieved in part by using materials from learners' cultures and history to illustrate specific principles and concepts. Culturally responsive approaches also help develop critical thinking skills, encourage cooperative learning, teach whole-language principles, build self-esteem, and recognize multiple intelligences and diverse learning styles (Abdal-Haqq, 1994).

Many resources exist to assist teachers in implementing culturally responsive instructional strategies. For example, there are checklists that help teachers assess curricular materials for cultural relevance. Several of these checklists identify biases, both subtle and blatant, that teachers should look for in books and other instructional materials. These biases include invisibility, stereotyping, unreality, language bias, selectivity and imbalance, and fragmentation and isolation. Other resources include *AskERIC*, an Internet-based question-answering service designed specifically for educators. Within 48 hours following requests, *AskERIC* staff members respond to teachers' requests with information from the ERIC database and from other Internet resources. The *AskERIC* electronic library provides lesson plans; resource guides; reference tools, including electronic searches; and full-text ERIC digests. Teachers can

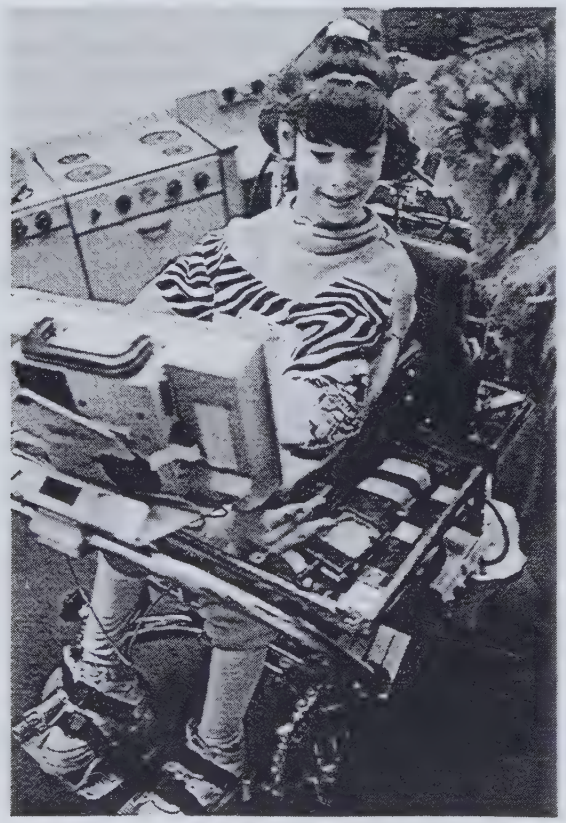
access it directly via the Internet at <http://www.genome.ou.edu/eric.html> (Abdal-Haqq, 1994).

■ Appropriate Use of Technology

Speaking of technology, effective instructional approaches use it appropriately. As long as a school is equipped with a few essential technological tools, such as Internet access, appropriate software, and adequate computers, the possibilities for using technology as part of the teaching/learning process are limited only by educators' ideas and creativity. For example, students can use e-mail to connect with mentors ("telementoring") and electronic "pen pals," and teachers and students can use e-mail to continue discussions beyond the regular school day or year.

The Internet serves as a gigantic virtual library, containing an ever-expanding repository of information that both students and teachers can use. Electronic mailing lists, virtual classrooms, Web sites, and Internet search engines are among the many Internet-based instructional tools teachers can utilize. In addition, there is a whole universe of educational software packages and interactive CD-ROMs that can be used for computer-based instruction, including programs that allow learners of almost any age to create multimedia presentations or their own home page on the World Wide Web (Dede, 1998).

Assistive technology increases, maintains, or improves the functional capabilities of individuals with disabilities.
(© Susie Fitzhugh)



Assistive technology Assistive technology (AT) is another way technology can be used to improve teaching and learning. AT is a product of the Technology Related Assistance Act (TRAA) of 1988, which provided funds to the states for the purpose of supplying assistive technology to all citizens, with no distinction made between adults and children. TRAA defines **assistive technology** as "any item, piece of equipment, or product, whether acquired commercially, off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of individuals with disabilities" (quoted in Behrmann, 1998, p. 75).

AT tools include computers, electronic equipment, software, pencil grips, mouth sticks, mechanical hoists, and a wide array of other assistive devices. AT vision tools include computer screen enhancement and speech output mechanisms, such as talking books. AT hearing tools include special telecommunication and translation devices, amplification devices, and environmental indicators, such as lights substituted for fire alarms, doorbells, and telephone rings. AT communication tools include sign language, lip reading, communi-

cation boards, touch screens, and digitally recorded voice output. Finally, AT orthopedic tools include mobility devices, pointing devices, and computer access devices, such as voice recognition, adapted keyboards, and touch-sensitive computer monitors (Behrmann, 1998).

Several Web sites contain information pertinent to assistive technology and the legislation that created it, including the Council for Exceptional Children (CEC) site, the National Center for the Improvement of Practice (NCIP) site, and the Trace Center site (see Relevant Resources for Professionals at the end of this chapter).

Building an Instructional Strategies Repertoire

Once again, we find ourselves in the position of attempting to summarize in a relatively brief overview a topic to which entire books have been devoted. Therefore, we remind you that our purpose here is to provide you with an *introduction* to teaching models and strategies. Please view it as a point from which to begin your further exploration and study of teaching models. Use the References section at the end of this book to continue learning about teaching models and strategies.

In preparing this overview we selected a range of approaches appropriate for different teaching/learning situations and occupying different positions on the learner-centered/teacher-centered continuum, including direct instruction, presentation, concept teaching, inquiry learning, creative problem solving, cooperative learning, simulation, and discussion. As you read about these different models and strategies, we encourage you to reflect on their potential for emulating best-practice principles.

Direct Instruction

Teachers often use some form of **direct instruction** to teach basic skills, facts, and knowledge. Direct instruction is an appropriate approach for teaching both procedural and declarative knowledge. Typically it includes the following steps (Gunter, Estes, & Schwab, 1995):

1. *Review previously learned material.* Students must understand how their existing knowledge and skills relate to their new learning. Therefore, direct instruction begins by reminding students of what they already know, so that they can connect new learning to that knowledge.
2. *State objectives for the lesson.* Teachers then communicate the instructional objectives to students, in terms they can understand. It's also important for teachers to clearly articulate why they're doing what they're doing. That way, students will know the intended purpose and relevance of the instruction.
3. *Present an advance organizer for the new material.* An **advance organizer** is simply a statement or concept a teacher makes or presents to help students

understand how previous information relates to new learning and connect what they already know with what they're about to learn. An effective advance organizer sets the stage for learning and serves as a point of reference throughout the lesson. The concept that's selected to serve as the advance organizer should be an idea that's more general than the new material and that provides learners with a context for the new learning. For example, *land forms* would be an appropriate advance organizer for a lesson on geographical terminology associated with mountainous regions (such as *plateaus, peaks, valleys, buttes, crevices, cliffs*). In presenting new information, teachers also must help students make connections between what they already know and what they're being asked to learn. In other words, teachers need to apply the principles of schema theory.

4. *Guide practice and provide corrective feedback.*
5. *Assign independent practice and provide corrective feedback.*
6. *Review periodically and provide corrective feedback if necessary.*

Previously we discussed the importance of teachers' providing immediate feedback as learners practice new skills and concepts. Guided practice plays a feature role in direct instruction. As learners move on to independent practice and maintenance, teachers still need to monitor student performance to ensure skills and concepts are being practiced and reviewed accurately and appropriately (Gunter, Estes, & Schwab, 1995).

Kathryn Blok, who several years ago served as a reading methods instruc-

New teachers talk

Describe the decision-making process you use in selecting instructional strategies that are appropriate for particular teaching/learning situations. What variables do you consider in making decisions regarding your choice of instructional strategies, and what criteria guide your decisions?

I try to involve my students in two in-depth projects a year. When we aren't involved in a project, I use units that have been successful in previous years. I truly believe that when learners are involved in an in-depth investigation, when they're actively engaged in an activity, when they're excited about what they're learning, and when they're directing the project, that's when the most brain growth occurs.

—JANA, Third-Year Teacher

I use a variety of instructional strategies in my classroom. I believe teachers must have a large repertoire of strategies and must be willing to use any one at any given time. That depends on several things. First, I have to take into consideration what the students were doing before the activity. I like to provide a change of pace by interspersing cooperative group work with individual tasks. I believe I know my students best, and that's why I choose the best strategies for them. What works

tor at Calvin College, summarizes direct instruction as follows: "I'll tell you. I'll show you. I'll lead you. Now you show me."

"I'll tell you" includes stating objectives and presenting new information. "I'll show you" involves teachers modeling or demonstrating skills and procedures for students. "I'll lead you" is the stage that provides learners with opportunities for guided practice, and "Now you show me" provides learners with opportunities to demonstrate that they have met the instructional objectives. Those opportunities can take a variety of forms, as you'll see in Chapter 11, on assessment and evaluation.

Presentation

Teachers often use—and sometimes overuse—the **presentation model** to help students learn and retain declarative knowledge. When used effectively, this model also can help learners acquire effective ways of thinking about, assimilating, and processing information. Typically the presentation model includes the following steps (Arends, 1998):

1. *Present objectives and establish set.* Teachers begin by communicating the instructional objectives to students in terms they can understand. Once again, it's also important for teachers to clearly articulate why they're doing what they're doing. That way, students will know the intended purpose and relevance of the instruction.
2. *Present an advance organizer.* As noted previously, an advance organizer sets

one year might not work the next. I plan lessons by looking at our county's Quality Core Curriculum. Then I decide what approach would be best for my students to learn and retain certain information. If time permits, I do more hands-on activities where the students can work in small groups. Projects, discussions, and authentic assessment take place throughout that time.

—Jesse, Second-Year Teacher

Authors' Analysis:

Themes that run through both of these teachers' responses are student involvement and active engagement in the learning process. Jana also emphasizes the importance of learners' directing their own learning.

Now It's Your Turn

How will you decide which instructional strategies you'll use in different situations? In your teaching journal, describe the decision-making process you'll use in selecting instructional strategies. What variables will you consider and what criteria will guide your decisions?

the stage for learning and serves as a frame of reference throughout the lesson, a focal point around which learners can organize and store information logically so that they'll be able to retrieve it easily later.

3. *Present learning materials.* As with direct instruction, teachers using the presentation model must organize the content in a logical manner beforehand. In addition to presenting the content in a logical sequence, teachers should attempt to view the content from their students' perspectives so they can present the material in ways that will be meaningful for learners.
4. *Check for understanding and strengthen learner thinking.* In the fourth and final phase of the presentation model, teachers ask questions that provide opportunities for learners to reflect on the lesson's content. These questions also encourage students to apply critical thinking strategies as they use the information and concepts they've learned. Their responses allow teachers to assess students' understanding of the concepts presented and to extend and strengthen students' understanding of these concepts.

Concept Teaching

Concept teaching strategies are designed to facilitate learners' acquisition of declarative knowledge. One particular concept teaching strategy is the *concept attainment model.* It includes the following steps (Gunter, Estes, & Schwab, 1995):

1. *Select a concept and determine its type.* The concept attainment model is appropriate for teaching concepts that have clear criterial attributes and distinguishing features (such as classification systems in biology, parts of speech, geometric shapes, types of sentences). Complex concepts that are abstract and subject to personal interpretation (such as freedom, ethics, cooperation) are more difficult to address effectively via the concept attainment model.

   There are three types of concepts. **Conjunctive concepts** are constant and do not change. For example, the land form known as an island always is a body of land completely surrounded by water, and the geometric shape known as a square always is a closed figure consisting of four equal sides and four equal angles. In contrast to conjunctive concepts, **disjunctive concepts** can take alternative forms. For example, the concept of *noun* can have a variety of forms, including pronoun, proper noun, collective noun, and common noun. Finally, **relational concepts** describe relationships between two or more other concepts. For example, the concept *time* describes relationships between the concepts *seconds, minutes, hours, days, weeks, months, years, decades,* and *centuries.* It's important for teachers to be able to distinguish between the different types of concepts, because the variable of concept type affects the ways in which concepts are learned. Consequently, it also should affect how teachers organize instruction and which instructional strategies they select and implement.
2. *Identify the concept's critical attributes.* During the instructional planning stage, teachers identify qualities that are essential to the concept. These often are referred to as **critical attributes.** For example, having three sides

is a critical or essential attribute of a triangle, whereas being blue is a noncritical attribute.

You may be tempted to think that identifying a concept's critical attributes is an easy task, but our experience indicates that preservice teachers sometimes struggle with this task. For example, what are the critical attributes of the concept *bird*? Without giving the matter much thought, you might say that "Birds fly, of course, so that's a critical attribute." But after reflecting a bit you might remember that some birds don't fly, such as emus, ostriches, and penquins. You also might reflect that not everything that flies is a bird (for example, flies, moths, butterflies, jets, and helicopters all fly). But then again, all birds have wings, don't they? Yes, they do—but is everything that has wings a bird? Ladybugs, bats, and an assortment of other animals have wings, as do planes and some Roman and Greek gods and goddesses. That fact leads you to the conclusion that you must add other critical attributes to *wings* to exclude all other concepts except *birds*. You can no doubt appreciate that this seemingly simple task requires careful analysis on teachers' part to ensure that they provide students with accurate, specific, complete introductions to concepts and their critical attributes.

What are the critical attributes of the concept *bird*? (© Larry West/FPG INTERNATIONAL)

3. *Develop positive and negative examples of the concept.* During the instructional planning stage, teachers also develop positive and negative examples of the selected concept. Sometimes these are called examples and nonexamples. Initially, teachers should provide very straightforward, clear-cut examples and nonexamples. Eventually they can present concept examples and nonexamples that require higher degrees of discrimination and analysis. For example, for the concept *noun,* teachers could begin with examples such as *animal* and *day* and nonexamples such as *always* and *of.* However, they would not begin with words that sometimes function as nouns but also can function as other parts of speech (such as *run* or *can*).
4. *Introduce the process to the students.* As with any other strategy, students must have opportunities to learn how to use the concept attainment model. Teachers could incorporate a think-aloud into their instruction as they model the process and guide learners through the different steps of the model.
5. *Present the positive and negative examples and list the critical attributes of the concept.* After presenting the examples and nonexamples they have identified, teachers then present the critical attributes of the concept.

6. *Develop a concept definition.* Once the concept's critical attributes have been identified, teachers can facilitate students' attempts to define it. If all of the critical attributes have been correctly identified, the concept definition typically becomes quite obvious. For example, a triangle's critical attributes are three sides, three angles, and a closed figure; a concept definition for *triangle,* then, could be "A triangle is a closed figure that has three sides and three angles."
7. *Give additional examples of the concept.* Once students develop a concept definition, teachers can provide additional examples. However, more important, they can invite learners to provide their own examples.
8. *Discuss the process with the class.* During this step, teachers facilitate discussion of the process, focusing on learners' reactions to the concept attainment model—how difficult or easy they found it and what they liked or disliked about it. Teachers also can use this step to incorporate a review of the concept attainment model.
9. *Evaluate students' understanding.* Having discussed the process, it is then time to focus on student performance. Can they recall and apply the concept definition and produce original examples that demonstrate their understanding of the concept?

■ Concept Relationships

When implementing the concept attainment model, it's important to teach the relationships between various concepts. Relationships between concepts can be described as either superordinate, coordinate, or subordinate. For example, *triangle, square,* and *circle* all occupy a subordinate position in relation to *shapes* but have a coordinate relationship with one another. By contrast, *triangle* occupies a superordinate position in relation to *right, isosceles,* and *equilateral.* Although all triangles are shapes, not all shapes are triangles, and a right triangle is both a type of triangle and a shape (Gunter, Estes, & Schwab, 1995).

Inquiry Learning

The **Suchman inquiry model** is an approach for teaching problem solving through discovery and questioning. It's based on the belief that the strategies scientists use to solve problems and explore the unknown can be taught and learned and that people learn best those things that puzzle and intrigue them. Generally, any problem-solving attempt begins with the recognition that a problem exists and a willingness to accept the challenge of finding solutions. The next steps typically involve gathering information through questioning and research, forming hypotheses, and testing possible solutions in a variety of contexts. A combination of individual and cooperative efforts often benefits problem-solving processes. Problem solving, in turn, offers benefits to learners and to the teaching/learning process. Those potential benefits include the following (Gunter, Estes, & Schwab, 1995): an increase in intellectual potency, a

shift from extrinsic to intrinsic rewards, learning the heuristics of discovery, and improved memory processing.

The Suchman inquiry model is an appropriate approach when problems have more than one acceptable response. Consequently, it would be appropriate to use it to postulate reasonable hypotheses explaining why changes of the Earth's tides seem to be related to the Earth's position relative to the moon. However, it would not be appropriate to use it in response to a question asking who was president of the United States during the Civil War.

The Suchman inquiry model typically includes the following steps (Gunter, Estes, & Schwab, 1995, p. 159):

1. Select a problem and conduct research.
2. Introduce the process and present the problem.
3. Gather data.
4. Develop a theory and verify or disprove it.
5. State the rules and explain the theory.
6. Analyze the process.
7. Evaluate the process and results.

Creative Problem Solving

Creative problem solving (CPS), as its name signifies, is another approach to problem solving. CPS is a systematic process for approaching a problem in an imaginative way that will result in effective action. As Isaksen, Dorval, and Treffinger (1994, p. 33) explain, "Problem solving and creative thinking are closely related. Creative thinking produces new outcomes, and problem solving involves producing novel responses and outcomes to new situations. Problem solving often has creative aspects, but creativity is not always problem solving."

CPS can be analyzed at several different levels. The most general level includes three components: understanding the problem, generating ideas, and planning for action. Although earlier versions of CPS were more linear (for example, Parnes, 1981), the CPS components don't necessarily happen in any particular order. Because CPS is situational, the sequence of components and the time spent on each component depend on the situation and the problem being addressed. Once again, "It depends." Each CPS component includes specific stages, and each of those stages, in turn, has two phases: divergent and convergent thinking. As we discussed earlier, the goal of divergent, or soft, thinking is the production and generation of many unusual options, whereas the goal of convergent, or hard, thinking is the analysis, evaluation, development, and refinement of the ideas generated from divergent thinking (Isaksen, Dorval, & Treffinger, 1994). Following are the three components of CPS:

1. *Understanding the problem.* This component includes the three stages of mess finding, data finding, and problem finding. Before a problem can be solved, someone must first recognize that it exists. Someone has to notice that there's a problem in need of attention; this is what "mess finding"

refers to. Then they must locate as much information as they can that relates to that particular "mess" (data finding). This information may come in a variety of forms, including facts, opinions, observations, testimonials, and artifacts. Next, they must formulate a problem statement that does not preclude possible solutions; this is the problem-finding stage. For example, asking "How can I unlock my car, now that I've locked my keys in it?" does not allow solutions that involve other ways of getting where you need to go, such as taking a cab or bus or asking a friend for a ride. If the most immediate problem is to get to a specific place in a timely manner, then the problem statement should be modified to something like: "How can I get to my appointment on time, in spite of the fact that I've locked my keys in my car?"

2. *Generating ideas.* This is the CPS component that features idea finding. Having already developed a clear and precise problem statement, here the focus changes to producing many ideas for consideration as possible solutions. Although brainstorming and divergent thinking play key roles in all stages of CPS, during the idea-finding stage they take center stage. Here, the admonition to defer judgment definitely should be heeded, as the purpose of idea generation is to produce as many ideas as possible and, in the process, avoid mental ruts and tunnel vision.
3. *Planning for action.* This component includes solution finding and acceptance finding. First, assuming the role of Judge (von Oech, 1986), problem solvers evaluate the ideas they've generated, using the predetermined criteria they've developed for that purpose. However, having a workable or even a great idea is insufficient. Many great ideas never see the light of day. That's why problem solvers must next assume the Warrior role (von Oech, 1986), as they move on to the acceptance-finding stage. Acceptance finding involves marketing the agreed-upon solution—"selling it" to the "consumers," or the people whose approval and cooperation are needed for implementation (Isaksen, Dorval, & Treffinger, 1994).

Cooperative Learning

People's environments affect their behaviors. Deming, who introduced the concept of Total Quality Management, estimated that 85 percent of people's behavior is attributable to the environment in which they operate, which implies that changing the environments in which people operate will change their behavior as well. The interaction patterns utilized within organizations play dominant roles in shaping those environments, and, consequently, the behavior of the people within those environments. When individuals must compete for limited resources, competitive interaction patterns result. In competitive environments there are typically few winners and many losers. When people act on their own behalf with little or no regard for what others are doing, individualistic interaction patterns result. In individualistic environments, members have little motivation to collaborate. By contrast, when the success of one individual is tied to that of other organization members, cooperative in-

teraction patterns result. In cooperative environments, members collaborate for the purpose of achieving mutual goals (Daniels & Gatto, 1996).

James Watson, codiscoverer of the double helix and a Nobel Prize winner, once said, "Nothing new that is really interesting comes without collaboration." Vygotsky, an eminent Russian psychologist, reflected, "What children can do together today, they can do alone tomorrow" (Johnson & Johnson, 1994, p. 86). Cooperative learning is an instructional approach that both Watson and Vygotsky could advocate. Its purpose is to make group members stronger as individuals.

■ Traditional Learning Groups Versus Cooperative Learning Groups

Cooperative learning is many things: positive interdependence, individual accountability, collaboration skills, and heterogeneous grouping. There are also some things cooperative learning is not: it's not new, it's not magic, it cannot be used entirely by itself, it cannot be learned all at once, and it cannot be used all of the time (Jacobs, 1997). Teachers who overlook some of the "nots" associated with cooperative learning may also overlook some potential problems and challenges, including students' or teachers' inexperience with cooperative learning, cultural differences, students' unfamiliarity with one another, group size or physical proximity, an uninteresting or artificial cooperative task, satiation with a task, lack of task completion, or need for increased motivation in the direction of the task (Putnam, 1997).

■ Elements of Cooperative Learning

Cooperative learning can be used effectively at all grade levels, in every subject area, and with any task. It is a generic human endeavor that affects many different instructional outcomes simultaneously. As Johnson and Johnson (1994, p. 76) put it, "The truly committed cooperative learning group is probably the most productive instructional tool educators have." Five elements are essential to cooperative learning:

- *Face-to-face promotive interaction* is the term used to describe cooperative learning's emphasis on students' helping, assisting, supporting, encouraging, and praising one another's efforts to learn. This element includes orally explaining how to solve problems, discussing concepts being learned, teaching knowledge to group members, and connecting past and present learning.
- *Individual accountability* implies that each individual's performance is evaluated and the results are given to the individual as well as to the group. Consequently, members of cooperative learning groups know who needs more assistance, support, and encouragement and that they can't glide by on the work of others.
- *Interpersonal and small-group skills,* both in the form of task work and teamwork, are essential elements of cooperative learning. Students must engage in both simultaneously. Therefore, teachers must facilitate learners' acquisition of social skills for high-quality cooperation, as well as their leadership,

decision-making, trust-building, communicating, and conflict-management skills.

- *Group processing* is another essential element of cooperative learning. Group members discuss the degree to which they're achieving their goals and maintaining effective working relationships. They also describe what actions are helpful and unhelpful and make decisions about what behaviors to continue or change.
- *Positive interdependence* is the most important element and the heart of cooperative learning. When engaged in cooperative learning tasks, students must understand that they sink or swim together; one cannot succeed unless everyone succeeds. There are three steps to fostering positive interdependence:

  1. Assign the group a clear, measurable task.
  2. Create positive goal interdependence. That is, make it clear that individual members can attain their goals only if the group attains its goals. This ensures that the group is united around a common goal.
  3. Supplement positive goal interdependence with other kinds of positive interdependence, such as **role interdependence,** which is created when group members have complementary, interconnected roles (such as reader, recorder, reporter); **resource interdependence,** sometimes referred to as a "jigsaw," in which group members might need to share one set of materials and subdivide them so each member is responsible for a certain part; **task interdependence,** where a division of labor is created and the actions of one group member must be completed if the next group member is to complete his or her responsibilities; and **reward interdependence,** where group members learn new material together, are assessed individually, and then are rewarded on the basis of a performance ratio, such as 50 percent credit for every problem they solve correctly and 50 percent of the group members' average performance (Johnson & Johnson, 1994; Putnam, 1997).

The Structural Approach to Cooperative Learning

Cooperative learning takes many different forms. The structural approach to cooperative learning emphasizes the use of particular structures to influence learners' interaction patterns.

Think-Pair-Share One example of the structural approach is Think-Pair-Share, a simple, efficient, effective cooperative learning strategy. As its name implies, it includes three steps (Arends, 1998, Lyman, Foyle, & Azwell, 1993; Putnam, 1997):

1. *Thinking.* Teachers ask a question or introduce an issue, and students think alone about the answer or issue for a minute or so.
2. *Pairing.* Students pair off and for four or five minutes discuss what they've been thinking about.

3. *Sharing.* Pairs share their answers and ideas with the whole class.

Numbered Heads Together For this approach, rather than directing questions to the whole class, teachers use the following four-step structure with small groups of students (Arends, 1998; Putnam, 1997):

1. *Numbering.* Teachers divide the class into teams of three to five students. Students in each team number off, so each member on a team has his or her own number between 1 and 5.
2. *Questioning.* Teachers ask students a question.
3. *Heads Together.* Team members put their heads together to figure out the answer and to make sure all team members know the answer.
4. *Answering.* Teachers call out a number, and students from each team with that number raise their hands and provide answers to the whole class.

Team Word-Webbing For this approach, team members write simultaneously on a piece of chart paper. They draw main concepts, supporting elements, and bridges representing relationships between ideas and concepts (Putnam, 1997).

■ Modifying Cooperative Learning for Learners with Special Needs

With some modifications, cooperative learning also can be used effectively with special needs learners. For example, teachers can modify the instructional objectives to better suit this group of learners. Or they can use the same objective but a different method for student response, the same objective but a modified presentation of material, the same objective but a reduced workload, or the same objective but a lower level of expectations. Teachers also can use personalized objectives, similar to those that appear in individualized educational plans (IEPs). In addition, teachers can modify instructional materials or the learning environment and provide tutorials, study skills, and individualized support. Finally, to accommodate special needs, teachers can use a jigsaw method of cooperative learning to address differing ability levels. With a jigsaw method, the learning task is divided into pieces, with each piece requiring different skills or a different level of ability (Putnam, 1997).

Simulation

If you're ever tempted to doubt the significance of simulations as an instructional strategy, consider the flight simulator or a simulated automobile. Better to crash virtually rather than really! Simulations offer learners the advantage of beginning with simple tasks and then progressing safely to more complex tasks. The **simulation model** allows students to learn from self-generated feedback, by playing out specific situations within a controlled environment and then modifying their behavior based on their reactions and performances. Carefully planned, well-organized simulations can be used successfully with learners of almost any age. Of course, teachers must design simulations that are appropriate for their students' learning needs and developmental levels.

Younger learners typically need more structure and simpler simulations than older learners do.

For example, secondary students could participate in a collective bargaining simulation to apply concepts they've learned about, as well as their communication and negotiation skills. To connect simulations with specific content students are learning, teachers can place them within a particular context. For example, a teacher could connect the collective bargaining simulation with history content by telling students to imagine their negotiations are taking place during the period when the transcontinental railroad was built. Students could then speculate how history might have been different had laborers who worked on the transcontinental railroad engaged in collective bargaining to improve their salary, benefits, and working conditions.

The simulation model typically includes the following steps (Joyce, Weil, & Calhoun, 2000):

1. *Orientation.* Teachers begin by presenting the simulation's topic and the concepts it incorporates. They then explain the simulation process and provide an overview of it.
2. *Participant briefing.* In the second phase, teachers describe the scenario for the simulation. They also explain the rules and procedures of the simulation and discuss the roles and goals of simulation participants and the types of decisions they will make. Finally, they assign roles and hold a brief practice session.
3. *Simulation operations.* Teachers are now ready to conduct and administer the simulation activity. This phase includes making observations, collecting feedback, evaluating performance, assessing the effects of participants' decisions, and clarifying misconceptions as the simulation progresses.
4. *Participant debriefing.* Without this fourth and final phase, the simulation model offers only an activity or a source of entertainment and falls short of serving as an instructional strategy. The debriefing stage provides a forum for participants to summarize what happened and to share their perceptions of those events. It also permits teachers and students to summarize challenges they encountered in participating in the simulation and insights it gave them, to analyze the processes the simulation involved, to compare the simulation to the real world, to connect the activity to course content, and to evaluate and modify the simulation.

Teachers who use simulations as an instructional approach play four different roles (Joyce, Weil, & Calhoun, 2000):

1. First, teachers must clearly explain the simulation's rules and procedures.
2. Second, teachers function as referees. They must ensure that students follow the rules and procedures that have been established and communicated for a particular simulation.
3. Third, teachers serve as coaches. As necessary, they offer simulation participants advice designed to help them play better.

4. Fourth, teachers play the role of discussants. As indicated previously, simulations are incomplete if they don't include a debriefing component.

Discussion

The first step of the discussion model is one that teachers sometimes overlook. Teachers who effectively implement the **discussion model** first read any material they've asked their students to read and prepare questions designed to focus the discussion. Once they've developed the questions, they then cluster and sequence the questions in a logical way. Only then do they introduce the model to their students and conduct the discussion (Gunter, Estes, & Schwab, 1995).

However, perhaps more often than most teachers would care to admit, these initial steps are glossed over, and the teacher instead relies heavily on "in-flight planning" (commonly referred to as "flying by the seat of your pants"). Fortunately, some teachers excel in this area, but the quality of almost all instruction, discussions, and questions improves significantly with planning. For example, one of the most memorable negative examples of discussion planning and preparation we've ever seen was a preservice teacher's lesson plan that stated simply, "Discuss the Civil War." Needless to say, among the feedback we offered to that preservice teacher was the suggestion to narrow the discussion through the use of preplanned questions designed to focus learners' attention on particular, specific facets of the Civil War (such as economic effects, family conflicts, slavery as a moral issue, abolitionists and the role they played, secession). As suggested by the following description of the discussion model (Arends, 1998, p. 378), a lesson's objectives should guide teachers' selection of questions and provide the focus for the discussion.

1. *Provide objectives.* Teachers tell students the objectives for the discussion and gets students ready to participate.
2. *Focus the discussion.* Teachers provide a focus for discussion by describing ground rules, asking an initial question, presenting a puzzling situation, or describing a discussion issue.
3. *Hold the discussion.* Teachers monitor students' interactions, ask questions, listen to ideas, respond to ideas, enforce the ground rules, keep records of the discussion, and express their own ideas.
4. *End the discussion.* Teachers help bring the discussion to a close by summarizing or expressing the meaning the discussion has had for them.
5. *Debrief the discussion.* Teachers ask students to examine their discussion and thinking processes.

The discussion model relies heavily on questions. Questions and teachers' use of effective questioning techniques constitute yet another instructional strategy. Because novice teachers often struggle with the art and science of question asking, we've chosen to devote some time and attention in the next section to a discussion of questioning techniques and considerations.

What Role Can Questions Play in the Teaching/Learning Process?

In "real life," people ask questions for practical reasons—to obtain information, to help them make more informed decisions, to compare their thoughts and beliefs to someone else's, or to understand a perspective different from their own (Chuska, 1995). How do these reasons compare to the reasons classroom questions are asked? Typically, questions asked in classrooms are not based on the actual needs or interests of teachers or their students. Because teachers generally know the answers to the questions they ask, they don't learn anything new from the responses. However, students' responses can provide teachers with windows into students' thinking, logic, misconceptions, and error patterns.

Almost all of the questions students ask, both in and out of the classroom, have practical purposes. Learners ask questions to request permission, to get directions, to learn something new, to clarify, to make plans, to become better acquainted with someone, to resolve discrepancies, to make decisions, and to learn about others' experiences. The challenge for teachers is to transfer "real-life" reasons that learners ask questions to the classroom and the teaching/learning process.

All learning begins with questions. Questions generate interactions, such as conversation and debate. Skillful questioning leads to increases in active student involvement, interaction among students, student-initiated questions, higher-level thinking, and achievement of educational goals. Good questions help teachers and students alike to focus on generalizations, laws, concepts, and principles rather than on low-level objectives and outcomes. "Questions are fundamental to teaching because they encompass the three central components of effective teaching: They provide information; they help students connect that knowledge to previous and subsequent learning; and they take students to the highest levels of learning, in which they apply knowledge in various situations in their lives" (Chuska, 1995, p. 7).

What Kinds of Questions Promote Higher-Level Thinking?

Questions that promote higher-level thinking typically meet four conditions:

1. *They give learners something to think about.* There's a problem to solve; a decision to make; a dilemma, uncertainty, or paradox that requires further analysis.
2. *They allow students to draw on their past experiences, providing a reference point from which to think.* They also help students detect, analyze, and understand the filters through which they view reality and the biases and prejudices that affect their learning.

3. *They include a reason to think about the material.* Knowledge that stops with facts, rather than utilizing information, is of limited utility. Teachers can use the phrase "in order to" to help develop questions that give students a reason to think. For example, "I'm going to teach research skills in order to . . ." or "I'm going to teach fractions in order to . . ." If teachers complete such sentences with real-life reasons, they can encourage students to think and to apply the facts and skills they learn (Chuska, 1995).
4. *They promote different ways of thinking.* Teachers can plan for teaching ways of thinking by using the following steps (Chuska, 1995, p. 25):

   - Introduce the thinking skill.
   - Assign a task using that thinking skill.
   - Debrief the results of the task.
   - Reteach as necessary to improve the thinking skill.
   - Apply the thinking skill to a new task.
   - Compare the results with the previous effort.

Thinking skills should be integrated and infused into the curriculum rather than taught in isolation. A comprehensive thinking skills scope and sequence plan identifies the thinking skills and strategies to be learned throughout the curriculum, locates them in the subject areas where they are to be taught, and arranges them in the sequence in which they're to be introduced and applied (Beyer & Backes, 1990).

What Strategies Can Teachers Use to Incorporate More Divergent and Less Convergent Questions?

Many research studies indicate that teachers ask questions at the lowest cognitive levels 60 to 80 percent of the time (Otto, 1991). Others suggest that only about 5 percent of teacher questions can be categorized as divergent, or high-level, whereas 85 percent or more of teacher questions are at the recall level (Downing & Gifford, 1996). This is true in spite of the fact that teachers typically are encouraged to ask at least twice as many higher-order questions as lower-order questions.

■ Use Bloom's Taxonomy to Guide Questioning

Categorizing questions can prove helpful in developing interesting and challenging questions. Bloom's Taxonomy (see Table 6.2) is perhaps the guide most commonly used to analyze and categorize questions (Bloom, 1956). Teachers tend to rely on intuition-based questions if they are not familiar with specific questioning strategies, don't know how to use questioning strategies, and are unaware that evidence suggests that incorporating questioning strategies can lead to increased student achievement and knowledge retention. Teachers sometimes have little confidence that what they do can affect student learn-

ing. Unfortunately, when that's the case, it follows that they see little connection between their teaching and student accomplishments (Otto, 1991).

Three basic types of questions can help focus learners' thinking on specific concepts, skills, procedures, or content. These include preinstruction questions, during-instruction questions, and postinstruction questions.

Focusing Learners' Thinking

■ Preinstruction Questions

Questions that precede instruction are designed to serve a variety of purposes, including creating an anticipatory set; motivating students in the direction of the learning objective; helping students set goals; determining learners' readiness for a specific task, skill, or concept; stimulating learner thinking; conveying a purpose; and creating a positive learning atmosphere. Preinstruction questions also can serve to activate students' prior knowledge and existing schemata. Four questions can help teachers determine where to begin instruction and how far to take it (Chuska, 1995, p. 31): What do learners already know about the new topic? What do learners think they know? What do learners want to know? What do learners feel or believe about an issue or problem?

These four questions share some similarities with the **KWL strategy,** which features the questions "What do you *know*?" "What do you *want* to know?" and "What did you *learn*?" The first two questions are used prior to instruction to determine learners' knowledge base and schemata for the lesson topic and to determine what they're interested in learning about it. The third question is designed to follow instruction and to determine new knowledge learners have acquired as a result of instruction.

■ During-Instruction Questions

Questions teachers ask during the course of instruction typically are designed to inspire students' thinking and reflection as learning occurs, allow students to review material, involve students in evaluating their understanding of implicit and explicit learning, and encourage students to think ahead—to predict, anticipate, and identify trends and patterns. Students can do all of these things by analyzing and critiquing, anticipating outcomes, summarizing, detecting biases, and examining alternative viewpoints (Chuska, 1995).

■ Postinstruction Questions

Questions teachers ask following instruction are designed to determine the consequences of actions, ideas, and situations; summarize; identify examples or analogies; reflect on what was learned; draw conclusions; synthesize information and use it, along with past learning, in new ways; and extend students' learning (Chuska, 1995). However, one of the most important purposes of postinstruction questions is often overlooked. Since time is almost always a limiting factor in the teaching/learning process, teachers sometimes don't provide any true closure to lessons or activities. Instead they may find themselves

simply directing their students to move on to the next item on the agenda, whether it be recess, lunch, music, or physical education. When teachers neglect to ask postinstruction questions, they miss out on an opportunity to connect the concepts and skills that serve as the focus of the current lesson to past and future learning. This oversight ignores the critical role that connections and transference play in learners' schema development.

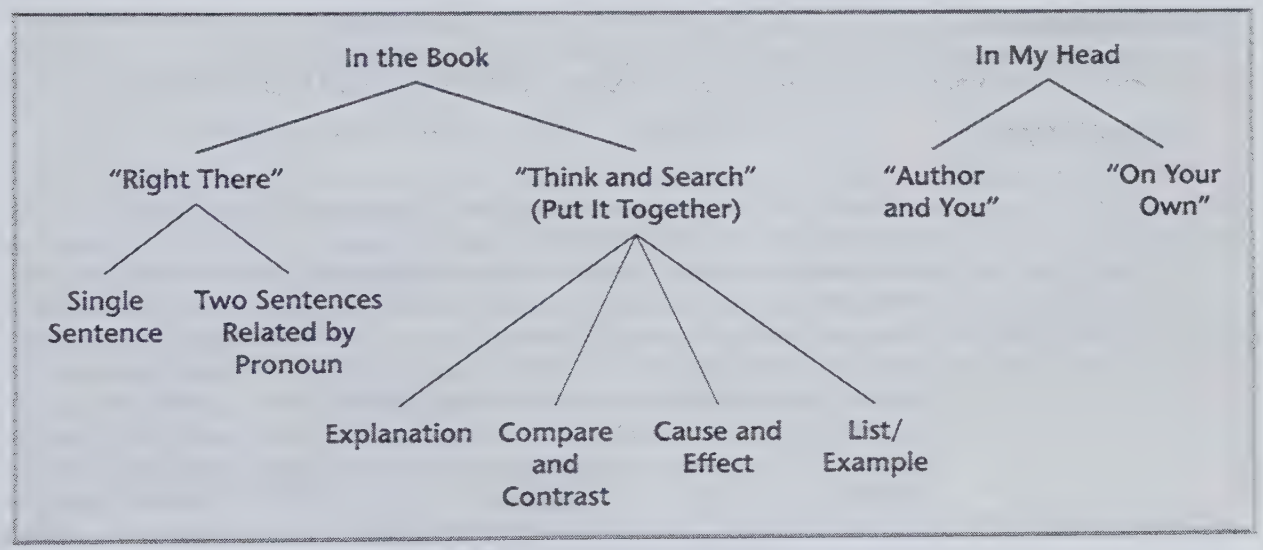
Purposes and Types of Questions Related to Reading

With regard to reading, there are three types of questions: textually explicit, textually implicit, and scriptally implicit. *Textually explicit questions* can be answered by information printed in the text; sometimes they're called recall or factual recall questions. *Textually implicit questions* can be answered using information contained in the text, but the information may not all be located in one place and the answer may require synthesis of information and the use of inference. *Schema-based questions* can be answered only by the use of external or nontextual information, or scripts, or schema; such questions typically require synthesis and evaluation (LeNoir, 1993).

Question-and-Answer Relationships

Another way of thinking about questions with regard to reading is **question-and-answer relationships** (QARs), which include "Right There," "Think and Search," "Author and You," and "On Your Own." In this classification, "Right There" equates to textually explicit questions and "Think and Search" to textually implicit questions, whereas "Author and You" and "On Your Own" are two variations of schema-based questions. Figure 6.2 illustrates the relationships

Figure 6.2
Question-and-Answer Relationships



(Raphael, 1986)

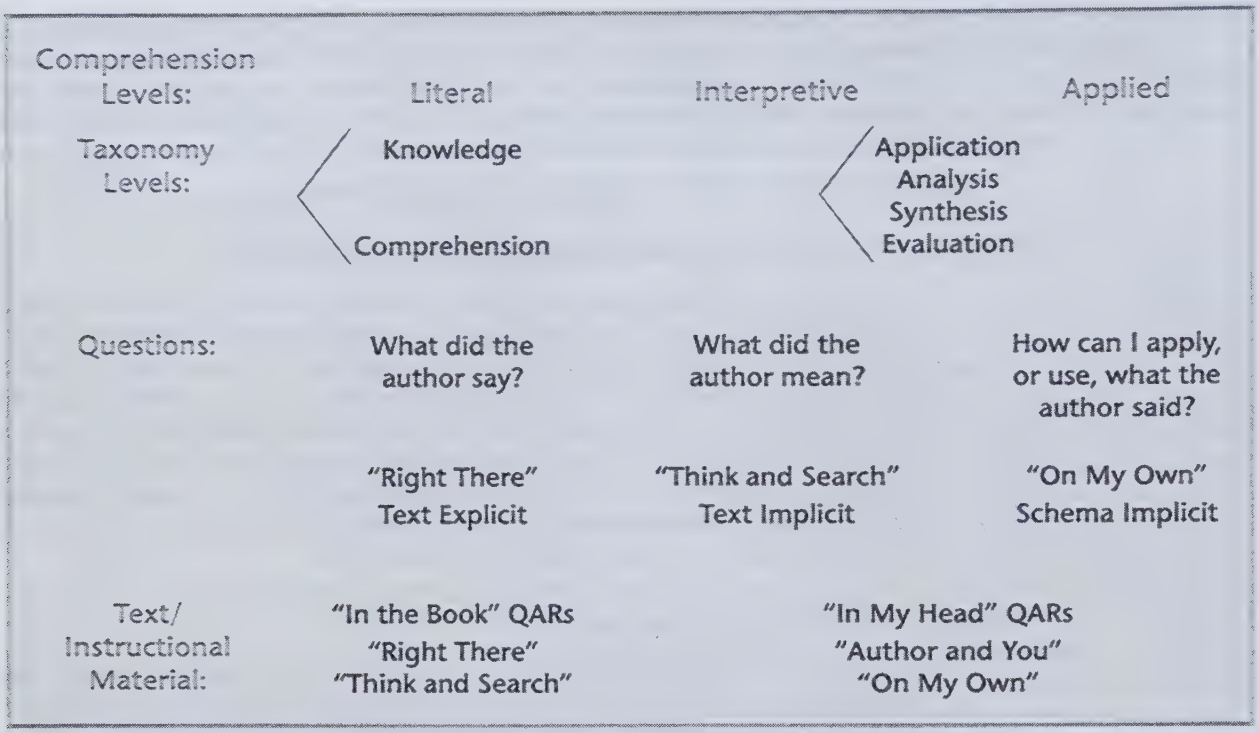


Figure 6.3
Question-and-Answer Relationships: Levels of Understanding

among the four types of QARs, and Figure 6.3 illustrates the different levels of thinking (Vacca & Vacca, 1996).

What Do You Need to Know to Use Questions Effectively?

If questions are to provide learners with opportunities to express their thoughts and feelings about the instructional topic, then they require careful thought and advance preparation. Off-the-cuff questions often are irrelevant, vague, or confusing and can even hinder rather than help learning. Students shouldn't have to "fish for" or guess what teachers have in mind (Karmos, Greathouse, & Presley, 1990). In addition to asking vague questions and giving inadequate attention to planning questions, other question-asking idiosyncrasies often exhibited by teachers include repeating questions, repeating student answers, answering questions for students, interrupting students, not attending to students, and selecting the same students to answer questions (Orlich, Harder, Callahan, Kauchak, & Gibson, 1998). By contrast, teachers who make effective instructional use of questions do the following (Orlich, Harder, Callahan, Kauchak, & Gibson, 1998):

- Ask questions that are clear, brief, and specific.
- Use systematic questioning techniques and a variety of questions.
- Adapt questions to learners' cognitive levels and affective needs.
- Encourage participation of all students.
- Encourage students to ask questions.

Reasons Students Are Reluctant to Respond to Questions

There are a number of reasons students commonly cite for not responding to questions. As a teacher, how could you address the following student concerns (Chuska, 1995)?

- They're afraid to fail.
- They're afraid of ridicule.
- They lack confidence because of past failures.
- They're unsure of the expected response.
- They're afraid to speak in class.
- They're uninterested in the topic or are apathetic.
- They're unwilling to be labeled a "brain" by other students.
- The question is too complex or unclear.
- The question is above their experiential level or is intimidating to them.
- A response is expected too quickly.
- They don't know the answer.
- They find the answer difficult to express.

How might you structure the learning environment—both the physical environment and the affective environment—to promote and encourage more active learner participation and more student responses to your questions?

How to Encourage Student Responses

Teachers can increase the probability of providing circumstances that motivate and interest students by ensuring they incorporate activities that provide relevance, ownership, connections, authenticity, responsibility, active participation, and learner choice. Basically, teachers need to apply best-practice principles (Zemelman, Daniels, & Hyde, 1998) to the question-asking process. Teachers who wish to encourage students to respond to questions also can ask fewer questions, provide time for answers, pay attention to students who are answering questions, and talk less (Chuska, 1995).

How to Call on Students

For students who are reluctant to talk in front of the class, teachers can structure small-group activities that provide a format in which they may be more likely to participate. By experimenting with a variety of different response for-

mats, both written and oral, teachers eventually will succeed at identifying formats that accommodate different learners and their concerns about participating in class discussions.

Teachers who know their students well also know how to set students up for success by asking hesitant or shy "nonvolunteers" open-ended questions to which they can respond appropriately. Brainstorming activities serve as one vehicle that allows all students to participate successfully in class activities and to provide "right answers" to teacher questions. Questions that ask students for their opinions, their preferences, or their evaluations and judgments also allow all students opportunities to respond successfully. Examples of such questions include:

- What's your favorite color?
- What do you like to do when there's nothing you have to do?
- What do you think of the school lunch menus?
- What are some alternative uses for a drinking glass?
- If you could be rich or famous, but not both rich and famous, which would you choose to be, and why?

How to Frame Questions

How teachers ask questions is as important as the questions they ask. Their facial expression, inflection, tone, gestures, physical position in relation to students, and other affective dimensions are critical variables, as is the manner in which they frame questions. We encourage you to use the following frame for questions that require learners to engage in higher-level thinking:

1. Ask a question.
2. Pause for ten to fifteen seconds.
3. Call on a student to respond.

■ Wait Time and Its Benefits

The above sequence encourages all students to attend to the question, as opposed to the sequence that begins with calling on a student and then asking a question. Although the results of some studies indicate that teachers wait only a fraction of a second between asking students a question and then answering it before the student does or calling on another student, there are some very compelling reasons for pausing between posing a question and asking students to respond to it (Orlich, Harder, Callahan, Kauchak, & Gibson, 1994).

■ Why Wait? Student Payoffs

Although wait time doesn't typically have any effect on student responses to lower-level questions, it can produce positive effects on their responses to higher-level questions. An obvious benefit of wait time is that it gives students time to think—first of all about teachers' questions and then about their responses to those questions. Other wait-time payoffs for students include in-

creases in student participation, student talk, student confidence, student-initiated questions, student-to-student interaction, and academic achievement, and decreases in the number of students who don't respond, student confusion, and peer interruptions.

■ Why Wait? Teacher Payoffs

Initially, teachers may experience increased anxiety as they learn to implement wait-time strategies. However, those who acquire the patience to be comfortable with a bit of classroom silence discover that wait time produces payoffs for teachers as well as for students. Wait-time teacher benefits include less teacher talk, less repeating of questions by teachers, and less repeating of student responses by teachers; fewer questions per class period and fewer lower-level questions; and more divergent questions, more application questions, more multiple-response questions, and more probing (Orlich et al., 1994).

Student Response Patterns

Student responses to teachers' questions tend to fall into one of the following four categories:

1. *Correct and firm.* Teachers should follow this type of student response with a new question designed to keep the pace of the lesson moving and to avoid overemphasis on success.
2. *Correct, but hesitant.* Teachers should provide some encouragement to this type of response, which usually occurs during the initial stages of learning.
3. *Incorrect and careless.* Teachers should correct and move on in cases where students know the process necessary to provide a correct response but instead make careless mistakes.
4. *Incorrect and lacking knowledge of facts or process.* Teachers should follow this type of student response by prompting, asking a simpler question, or reteaching in a different way (Gunter, Estes, & Schwab, 1995).

How to Respond to Students' Responses

Just as learning styles and instruction must be tailored to individual needs, so does the way teachers respond to individual students' responses. Teachers who know their students well and are adept at reading their nonverbal behavior can apply that knowledge and skill to the task of providing appropriate feedback to student responses. They also can incorporate humor appropriately and judiciously in their feedback to student responses.

■ Prompting

Prompting consists of reinforcing students positively while encouraging them to expand or elaborate on their answers (such as "Your prediction was right. When we boiled the water in the pan, it eventually disappeared, but where do

you think it went?" or "But what word do we use to describe water's disappearing act?"). Teachers' attempts to prompt student responses often benefit from observing students' nonverbal cues and restating questions at lower levels of thinking. However, in their attempts to prompt student responses, teachers should not resort to sarcasm (Orlich et al., 1994).

■ Probing

Probing questions help students think systematically and encourage them to reflect before they respond rather than impulsively blurting out the first response that occurs to them. Questions that ask for more specificity, greater elaboration, or the rationale and reasoning underlying students' responses are probing questions (Karmos, Greathouse, & Presley, 1990). For example, "Why do you think that?" "How did you come to that conclusion?" "What do you base that assumption on?" "What effects might such a change have on the environment?" "What specifics can you provide?" are all probing questions.

■ Redirecting

When teachers accept several students' responses to the same question prior to offering any feedback, they're implementing a strategy known as *redirecting*. That is, they pose the same question to different students. Teachers ask the question, wait for responses from several students, listen carefully to what each student has to contribute, and then respond in a way that communicates to participating students that they have contributed positively to the discussion (Karmos, Greathouse, & Presley, 1990).

Effective Question Asking: Planning and Implementation

One of the characteristics that typically distinguishes novice teachers from veteran teachers is the ability to apply the art and science of asking the right questions at the right times in just the right ways. However, there is much that all teachers—both beginning and experienced—can do to improve their instructional questioning strategies. We offer the following recommendations for your consideration. Many of them will probably sound familiar to you, as they represent a synopsis of this chapter's discussion of question-asking strategies.

- Plan some questions as you prepare your lesson plans. Consider your instructional goals, and emphasize questions that reinforce them. The questions you ask will help students see what topics you consider important.
- Ask clear, specific questions that require more than a yes or no answer. Avoid ambiguous or vague questions such as "What did you think of the story?" If students do respond with a yes, no, or too-short answer, ask a follow-up question that will encourage them to expand, clarify, or justify their answers.
- Use vocabulary that students can understand. Students cannot respond well to questions that contain unfamiliar terms.

- Ask questions in an evenly paced, easily identifiable order. Students might be confused by random, rapid-fire questions. Use questions to signal a change of topic or direction.
- Ask questions from all levels of Bloom's Taxonomy (knowledge, comprehension, application, analysis, synthesis, evaluation). Mixing more difficult questions that require synthesis and evaluation with lower-level questions can keep students actively switching gears, making connections between concepts, integrating new information and experiences with their existing schemata, and applying the knowledge and skills they're learning.
- Use questions to help students connect important concepts (such as "Now that you've learned about conservation of energy, how does this information help you relate the kinetic and potential energy of an object?").
- Use questions to give you feedback on whether students have understood the material ("Which part of the activity was the most difficult for you, and why?").
- Allow sufficient time for students to answer your questions (ten to fifteen seconds). Students need time to think about your questions and organize their answers before responding. Learn to wait until you get a student response. The resulting silence may be uncomfortable sometimes, but it's necessary in order for students to understand that you're serious about wanting answers to your questions. You can ask students to write down their responses to a question, then call on several students (multiple-response format) to share their answers. This technique requires all students to become actively involved in thinking about the questions you pose.
- Rephrase questions when students don't respond in the manner you anticipate. Admit that your original question may have been confusing.

Student Questions

In addition to encouraging students to respond to questions, teachers need to encourage students to ask questions. Student-generated questions indicate that students are actively involved and participating in the teaching/learning process and also provide observant teachers with information regarding learners' individual interests, schemata, misconceptions, and information processing. Use the following guidelines to encourage your students to ask questions:

- *Make it easy for students to ask, as well as answer, questions.* Learning environments should be risk-free for asking questions. Banish the notion of "a stupid question" from your classroom. Communicate to students from their first day with you that you expect and want them to ask questions. "You don't have any questions about that, do you?" serves as a deterrent to student questions rather than an invitation. Replace that question with questions such as "What questions do you have?" "What parts are unclear?" "Would you like another example to help you better understand this idea?" "Who can add another example to help make this idea even clearer?"

- *Make time for and expect student questions throughout your class.* Rather than leaving only two or three minutes for questions at the end of class or the end of the day, encourage students to ask questions at any time. Consistently waiting until the end of a lesson or the end of the day to ask, "What questions do you have?" becomes a signal for class to end, as opposed to an opportunity for students to ask thoughtful questions.
- *Pause to allow students to formulate questions.* This is another important and appropriate use of wait time. Asking students to write down questions they have actively engages all students, rather than just a few. After providing students with time to formulate and write their questions, you may then ask several students to share their questions.
- *Ask other students to answer student questions.* This strategy tends to encourage discussion and direct interaction between students, without unnecessary teacher direction.
- *Have students formulate questions prior to class.* This can serve as a variation on the KWL strategy. Students come to class with questions about the chapter they read or questions left unanswered by their reading or previous class discussion.

Remember, this chapter serves only as an introduction to instructional strategies and approaches and the many issues and variables associated with them. As you continue to grow and develop as a teacher, you'll add to your repertoire of instructional strategies—both in terms of quality and quantity. Doing so will increase the probability that you'll have the appropriate tools to use in specific teaching/learning situations.

Summarizing What You've Learned

- Teachers must respond to different learners, learner needs, and learning situations with a variety of instructional approaches and strategies. In deciding what instructional strategies and approaches to implement, teachers also must consider the kind of knowledge they are attempting to help students learn, because people learn different types of knowledge in different ways.
- Students' use of think-alouds also provide teachers with a window into learners' thinking processes, thereby allowing teachers to assess learners' abilities to appropriately apply various thinking strategies as well as analyze students' miscues, identify faulty information, and detect erroneous connections in their thinking.
- There are two main phases in the development of most new ideas: the germinal phase and the practical phase. During the germinal phase, ideas are generated and manipulated. This type of soft, divergent thinking is known as creative thinking. During the practical phase, ideas are evaluated and implemented. This type of hard, convergent thinking is known as critical thinking (von Oech, 1983).
- Productive thinking is a combination of creative and critical thinking. Therefore, it includes both divergent and convergent, soft and hard, germinal and practi-

cal thinking. To take ideas from germination to fruition and on to implementation requires engagement in the following four main roles: the Explorer and Artist roles, which primarily involve creative or divergent thinking; and the Judge and Warrior roles, which require critical or convergent thinking.

- Effective instructional strategies and approaches adhere to best-practice principles. They also make fun a natural part of the learning process. Fun produces positive effects on the teaching/learning process and serves as a powerful tool for enhancing a motivating and safe learning environment.
- The instructional approaches featured in this chapter include direct instruction, presentation, concept teaching, inquiry learning, creative problem solving, cooperative learning, simulation, and discussion.
- Almost all questions students ask, both in and out of the classroom, have practical purposes. The challenge for teachers is to transfer the "real-life" reasons that learners ask questions to the classroom and the teaching/learning process.
- All learning begins with questions. Skillful questioning leads to increases in active student involvement, interaction among students, student-initiated questions, higher-level thinking, and achievement of educational goals.
- Three basic types of questions can help focus learners' thinking on specific concepts, skills, procedures, or content: preinstruction questions, during-instruction questions, and postinstruction questions.
- How teachers ask questions is as important as the questions they ask. Their facial expression, inflection, tone, gestures, and physical position in relation to students are critical variables, as is the manner in which they frame questions.

YOUR PROFESSIONAL TEACHING PORTFOLIO

- Design a chart or matrix that summarizes the phases, purposes, and appropriate applications of different instructional strategies (such as direct instruction, the presentation model, concept teaching, the Suchman inquiry model, creative problem solving, cooperative learning, the simulation model, the discussion model, and literature-based instruction).
- Develop an instructional plan that showcases your ability to effectively incorporate questioning strategies in the teaching/learning process. Later in your preservice teacher preparation, videotape yourself teaching such a lesson and then write a self-assessment piece in which you analyze your teaching performance, cite strengths, and describe how you would modify your instructional plan.

Key Terms

Advance organizer
Assistive technology
Brainstorming
Concept teaching
Conditional knowledge
Conjunctive concepts
Creative problem solving
Creative thinking
Critical attributes
Critical thinking
Declarative knowledge
Direct instruction
Discussion model
Disequilibrium
Disjunctive concepts
Divergent thinking
Elaboration
Evaluation
Flexibility
Fluency
Germinal phase
KWL strategy
Metacognition)
Originality
Practical phase
Presentation model
Procedural knowledge
Productive thinking
Question-and-answer relationships
Relational concepts
Resource interdependence
Reward interdependence
Role interdependence
Simulation model
Suchman inquiry model)
Task interdependence

Relevant Resources for Professionals

Books and Articles

- Delacorte, P., & Witte, M. C. (1978). *The book of terns*. Middlesex, England: Penguin Books.
- Dunn, R. (1996). 19 easy-to-try ways to turn on students. *Teaching K-8, 27*(3), 50, 51.
- Fleischman, P. (1988). *Joyful noise: Poems for two voices*. New York: The Trumpet Club.
- Hoberman, M. A. (1978). *A house is a house for me*. New York: Viking.
- Isaksen, S. G., Dorval, K. B., & Treffinger, D. J. (1994). *Creative approaches to problem solving*. Dubuque, IA: Kendall/Hunt.
- Parish, P. (1963). *Amelia Bedelia*. HarperCollins Publishers.
- Putnam, J. (1997). *Cooperative learning in diverse classrooms*. Upper Saddle River, NJ: Prentice-Hall.
- Scieszka, J. (1992). *The stinky cheese man and other fairly stupid tales*. New York: Scholastic.
- Scieszka, J. (1995). *Math curse*. New York: Viking.
- Seuss, Dr. (1957). *The cat in the hat*. Boston: Houghton Mifflin.
- Silverstein, S. (1974). *Where the sidewalk ends*. New York: Harper & Row.
- Silverstein, S. (1981). *A light in the attic*. New York: Harper & Row.
- Staley, L. (1997). Teaching strategies: "What does purple smell like?" *Childhood Education, 73*(4), 240-242.
- von Oech, R. (1983). *A whack on the side of the head*. New York: Warner Books.
- von Oech, R. (1986). *A kick in the seat of the pants*. New York: Harper & Row.

Professional Organizations

- Best Practices in Education.
  A not-for-profit organization dedicated to working with American teachers to find effective educational practices from other countries to adapt and apply in U.S. schools. This organization sponsors innovative projects and facilitates their delivery to U.S. classrooms in pre-kindergarten through twelfth grade.

  http://www.bestpraceduc.org/
- The North Central Regional Educational Laboratory (NCREL).
  A not-for-profit organization dedicated to helping schools—and the students they serve—reach their full potential.

  http://www.ncrel.org/

Professional Journals in Education

- *Instructor*
  P.O. Box 53896
  Boulder, CO 80322-3896
  1-800-544-2917

  http://www.scholastic.com/instructor
- *Language Arts*
  Published by the National Council of Teachers of English
  1111 W. Kenyon Road
  Urbana, IL 61801-1096
  1-800-369-6283

  http://www.ncte.org
- *Technology & Learning Online*

  http://www.techlearning.com/
- *Young Children*
  NAEYC
  1509 16th St., NW
  Washington, DC 20036-1426
  1-800-424-2460

  http://www.naeyc.org

Web Sites

- **Council for Exceptional Children**
  Information on special education and links to other organizations.

  http://www.cec.sped.org/ericec/links.htm
- **ERIC**
  ERIC provides lesson plans, resource guides, and other valuable resources for teachers.

  http://www. genome.ou.edu/eric.html
- **National Center for the Improvement of Practice**
  Information on technology access in early childhood special education.

  http://www.edc.org/FSC/NCIP
- **Teaching Strategies**
  Teaching Strategies enhances the quality of early childhood programs by offering practical, developmentally appropriate curriculum materials, professional development programs, parenting resources, and staff development services.

  http://www.teachingstrategies.com
- **Trace Center**
  Information on resources for assistive technology and computer access.

  http://www.trace.wisc.edu
- **INSTRUCT**
  INSTRUCT is intended to provide on-line teacher professional development for planning, instruction, and assessment of mathematics classes.

  http://instruct.cms.uncwil.edu/
- **The Thinking Page**
  The Thinking Page is dedicated to providing information about ways for individuals and organizations to improve their thinking.

  http://www.thinking.net/
- **Just Think**
  Just Think's goal is to collaborate with educational organizations and the entertainment industry in teaching young people critical-thinking skills for evaluating today's media and providing them with production tools to create their own media projects.

  http://www.justthink.org/
- **The Science Learning Network**
  The Science Learning Network explores how telecomputing can support inquiry-based science education.

  http://www.sln.org/

7 Instructional Planning

THIS CHAPTER

- Defines three types of instructional units
- Presents a plan for developing an integrative unit
- Discusses how to create an overall weekly and daily schedule for your future classroom
- Explains the Project Approach
- Analyzes how instruction differs in a literature-based program
- Discusses ways to include learning centers in your future classroom
- Explains how cross-curricular connections benefit special needs students
- Discusses the benefits of integrative units
- Guides you through the instructional planning process
- Explains the purposes of clearly written instructional objectives
- Describes different approaches to the instructional planning process
- Discusses novice teachers' and experienced teachers' instructional planning

— OR —

Lesson plans that don't fit in a box

The Context and Components of Unit Planning

A **unit** is a collection of lessons, activities, and resources that are connected by a unifying concept or topic. In a primary classroom, a unit might be built around the topic of plants, "creepy crawlies," or grandparents. For example, students might read about grandparents, interview their own grandparents, create a time line of one or more grandparents' lives, and connect research on immigration and Ellis Island to their investigations of their grandparents' life experiences.

In the intermediate classroom, teachers might integrate history and literature by having students read novels set during major historical events (such as having the students read *Johnny Tremain* when they study the Revolutionary War). Interdisciplinary instruction is a hallmark of the middle school movement and is facilitated by block scheduling and team teaching. Middle school students involved in interdisciplinary instruction explore topics that are grounded in real-life problems and experiences such as survival or relationships. Later in this chapter we provide more information about interdisciplinary instruction.

Daniels and Bizar (1998) developed a model for establishing curriculum units at the secondary level. Students identify questions and concerns about themselves and about the world, and these questions and concerns eventually lead to topics that are investigated throughout the year in all content areas. For example, one high school we know of selected tolerance as a unit topic, and it was explored and studied by all ninth-grade students throughout the year.

"If telling were the same as teaching, we'd all be so smart we could hardly stand it."

—Mager, 1984a, p. 7

We find Mager's conclusion intriguing. What do you think brought him to it? What makes telling and teaching so different? Picture yourself as a student five, ten, or fifteen years ago. Think about learning experiences that you found engaging at different times in your prekindergarten through high school days. What set those experiences apart from ones you found less engaging or mundane?

In your teaching journal, speculate about the reasoning behind Mager's quotation. Then, based on your prior learning experiences, describe what you believe distinguishes teaching from telling. Share your reflections with a peer, and discuss the similarities and differences in your experiences and responses.

Types of Units

Three types of instructional units have been described by Feldhusen (1994): the resource unit, the content-oriented unit, and the conceptually oriented unit. The **resource unit** is described as a group of learning centers that are organized to promote independent, small group, or self-directed study. The **content-oriented unit** originates within a particular content area, such as science or social studies, but involves topics that can be investigated across all content areas, such as small animals or neighborhoods. Finally, the **conceptually oriented unit** involves the investigation of more broad-based topics. The broad foundation of conceptually oriented units provides learners with many opportunities to discover relationships between different ideas. Some examples of conceptually oriented unit topics include communication, conflict, patterns, power, and traditions. In Chapter 8 we presented schema theory as a structure for integrating curricula. As students discover relationships between ideas in a conceptually oriented unit, they are expanding their schemata by scaffolding these ideas.

Global Units: Passports to Learning

Units that are open-ended enough to be part of an entire school's curriculum are known as *global units*. For example, a unit on endangered species could be a global unit. Each class in a school could choose to study different animals or issues related to endangered species, based on the students' interests and level of understanding. Students within and across grade levels could then share their learning experiences, and the unit could culminate in a schoolwide Family Night, with each class presenting a display or production to showcase their

learning. This is an excellent way for parents and community members to participate in integrative teaching and experience the powerful learning opportunities that take place in dynamic school cultures.

■ Choosing an Appropriate Topic: Questions to Get You Started

In addition to *topic* and *concept*, you will also encounter the terms *theme* and *thematic teaching* in the context of instructional planning. A theme is similar to a topic in that it provides a unifying instructional focus. For clarity, we have decided to use the term *topic* to signify topics, concepts, and themes when referencing integrative units.

After reviewing a variety of sources that focus on topic selection (Dearden, 1984; Katz & Chard, 1997; Peterson, 1988; Robison & Spodek, 1965; Spodek, 1988), the following questions were suggested. It's important to consider every topic in light of these questions. Some topics are much too limiting, whereas others may be so obtuse that they don't provide enough focus.

1. *Is the topic appropriate for the grade level and developmental level of your students?* What expectations do you have for your students in math, science, social studies, language arts, fine arts, health, and physical development? Where can you go to get some help if you're not sure? One of the challenges that faces preservice teachers, and sometimes inservice teachers, is to develop an understanding of realistic, appropriate expectations for students within and across various grade and developmental levels. Curriculum guides, state and district learning goals, and scope and sequence charts are great places to start. Also, do some kid watching and observe the kinds of behaviors, attitudes, skills, and concepts that evolve as you spend time in classrooms with real students.
2. *Are students interested in the topic?* What's the best way to find out if students are interested in feathers, fish, or fossils? Ask them! Unit topics must evolve from real, live learners. Creating a KWL chart (What do you *know*? What do you *want* to know? What have you *learned*?), brainstorming ideas in cooperative learning groups, and interviewing groups of individual students are just a few ways that you can begin the process of preassessment. This process answers a few very important questions for you, the teacher (such as "What topics are interesting for the students in this class?" "What do they already know about this topic?" and "What would they like to know?"). Student interest in the topic is key to student success and motivation.
3. *Does the topic relate to the students' lives?* One suggestion shared by Lilian Katz, coauthor of *Engaging Children's Minds: The Project Approach*, for answering this question is to take a ten-minute walk around the area where your school is located. While taking this walk, make a list of all the things that are available, in your school neighborhood, for students to observe and study. Perhaps your school is located near a pond, a construction site, a wooded area, or a factory. What opportunities for study does your school's location provide? Because most students live in the school neigh-

borhood, the realities of the geographic area in which they live and go to school are topics that directly affect them on a daily basis. Think of your school community, and the area around it, as a real-life laboratory that is available for investigation.

Let's say that your fifth-grade curriculum guide states that "Students will demonstrate an understanding of the processes involved in a presidential election." If your students are not interested in the topic of elections and there are no real-life applications of it in their lives (such as mock elections in school), it is your job to create and sustain student interest in the topic. How will you do that? How about setting up an election in your classroom or working collaboratively with other teachers to conduct a schoolwide election? Students can design voting machines, create ballots and ballot boxes, make campaign buttons and posters, debate the qualifications of the candidates, and judge the credibility of the sources used by the campaign managers in developing their platforms. This approach will both peak student interest in the topic and provide a real-life application of it, because you will have designed an integrative unit, with student cooperation, to achieve these essential outcomes.

4. *Does the topic support the values and culture of the community and society?* This question has far-reaching implications that directly affect the multicultural health of your curriculum. Let's suggest that you develop an integrative unit on the topic of American heroes. Are the heroes you select representative of different ethnicities, races, genders, ages, and time periods? How are these demographics balanced in your curricular design? How will you help students develop an appreciation for, and acceptance of, American heroes who may represent cultures or values different from their own?

   To answer the question of whether a topic supports the values and culture of the community and society, it is necessary to take some time to reflect on those values and that culture. We would like to suggest three goals that should be infused into your curriculum to encourage antibiased and multifocused exploration of these topics. First of all, it is necessary to develop students' awareness of various values and cultures by exposing them to a wide array of cultures and values. Secondly, curricula must be designed to promote appreciation of various cultures and values that exist within a community and society. And, finally, acceptance of the cultures and values of different groups and individuals is the long-term goal of a multicultural curriculum. One of the most appropriate ways that we have found to incorporate these three goals into the curriculum is to use quality multicultural children's literature.

5. *Does the topic have the potential for in-depth and long-term learning across all content areas?* One of the questions preservice and inservice teachers commonly ask when discussing integrative unit planning is, "How long should my integrative unit be?" Since an integrative unit involves in-depth investigation and learning opportunities in all content areas, most integrative units should last at least one month. In a later section we'll suggest some

scheduling formats that will help you think through the elements involved in planning for in-depth learning.

6. *Is the topic worth knowing about?* It is said that the amount of information in the world currently doubles every twelve to eighteen months. Against this background, the question of topic worthiness becomes a key consideration in integrative unit and project planning. Should students spend an entire month of the school year studying apples? Or should this topic be expanded to fruits and vegetables, or perhaps trees?
7. *Does the topic support the learning goals and objectives outlined in your curriculum guide?* Remember the curriculum guide we discussed in Chapter 8? You probably will be presented with a district curriculum guide when you accept your first teaching position. How will you ensure that the integrative units you develop will satisfy the learning goals and objectives for the grade level you will teach? Your ability to plan and mediate the curriculum with your students becomes a challenging, but necessary, task.

What Are the Components of an Integrative Unit?

We began this chapter by giving a definition of a unit. We continue by focusing on the components of a particular kind of unit—an integrative unit. An **integrative unit** is a collection of lessons, activities, and resources connected by a unifying concept or topic that is contextualized in a real-life framework, and promotes active learning as learners acquire knowledge, performances (skills), and dispositions.

Definition of an Integrated Curriculum

An **integrated curriculum** incorporates the interrelationships or connections between different developmental domains and content areas. These are the glue that bonds together the many pieces of the curriculum. In addition to having interrelated and connected developmental domains and content areas, integrated curricula have the following characteristics (Wortham, 1996):

- *They are contextualized.* For learning to be relevant and purposeful, it must be grounded in a context (framework) that is meaningful to learners and related to their prior experiences.
- *They promote active learning.* Learners construct meaning as they engage in hands-on experiences involving materials and other people. Integrative units promote these kinds of learning activities.
- *They are designed to interrelate development with knowledge, performances (skills), and dispositions.* In contrast to the academic approach to instruction, in which cognitive development is seen as most important, an integrated curriculum promotes both cognitive and affective development while connect-

ing knowledge, performances (skills), and dispositions with the learners' social, emotional, physical, and cognitive development. Later in this chapter you will read more about an integrated curriculum.

Integrative Unit Outline

You can use the outline in Figure 7.1 to help you develop your first integrative unit. Although the list may seem fairly extensive, you'll notice that many of the items on it are resources that your students and you will develop collaboratively to support the unit. These resources will expand as you present the unit over a number of years. In fact, every time you teach the unit, the learners, the resources, and the activities will change, keeping your teaching fresh and keeping you engaged in your teaching. Have you ever known a teacher who has repeated his or her first year of teaching for the last thirty years? Using integrative units will ensure that this never happens to you!

Developing Each Component of Your Integrative Unit

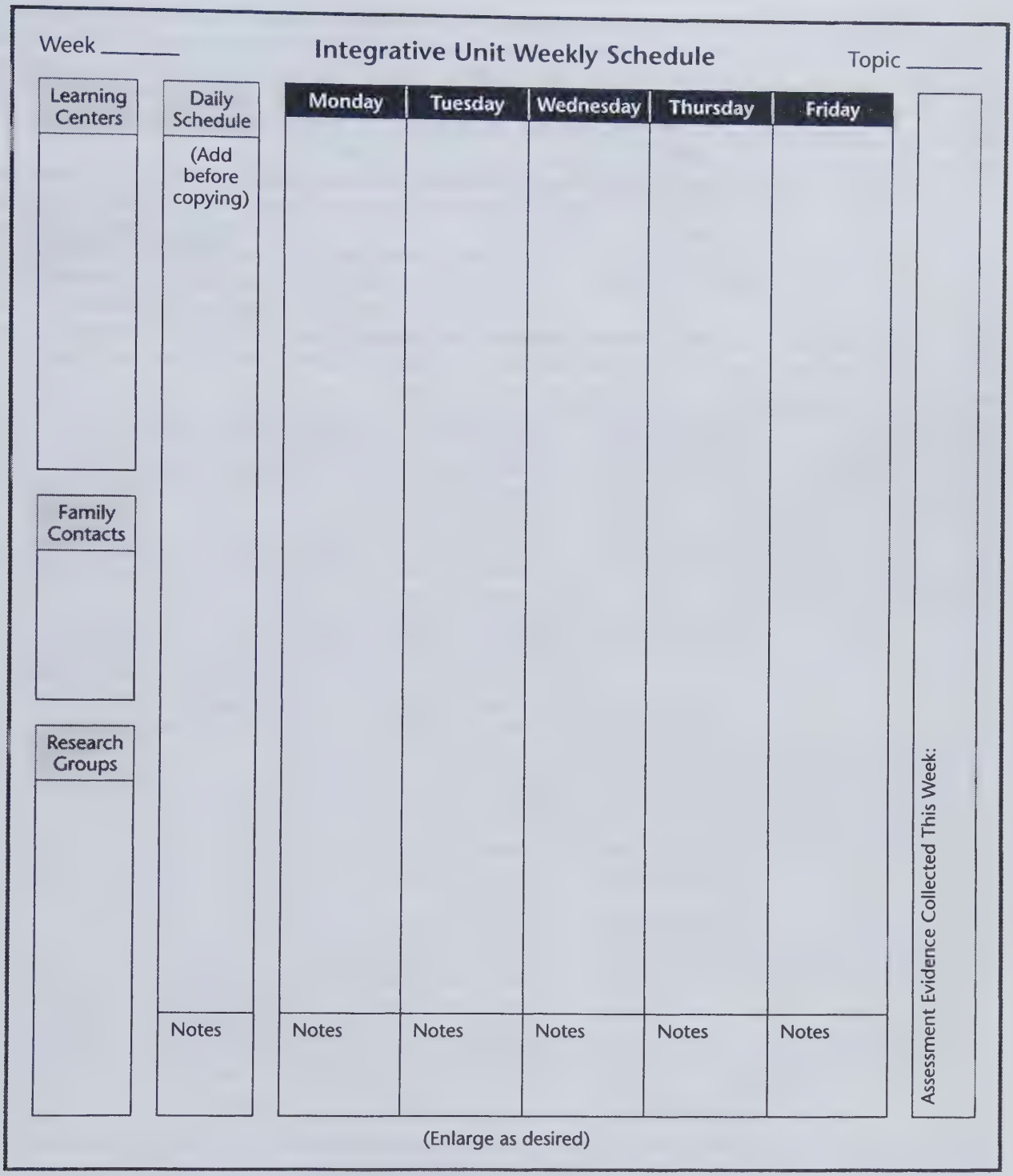
Review Figure 7.1 and begin to think about what you already know about each section. A short description of each component of the integrative unit plan follows.

- *Overview.* This includes information about the students' age or the grade-level focus of the unit, a brief synopsis of the intended classroom population (number of students, gender breakdown, cultural backgrounds, and anticipated special needs), and the unit topic, theme, or concept.
- *Rationale.* Develop a one- or two-paragraph rationale statement that concisely articulates the reasons why you have selected this topic/theme/concept for your integrative unit.
- *Goals and major concepts.* Develop a curriculum web that includes key concepts and topic subcategories, as well as a list of goals for your unit. We will review sample curriculum webs later in this chapter.
- *Daily lesson plans.* Detailed explanations for developing each of the five lesson plan components are included later in this chapter.
- *Learning environment design.* Later in this chapter you will explore the benefits of learning centers and read about many different kinds of learning centers. Use these ideas, as well as the sample classroom designs, to develop an ideal classroom to support your integrative unit.
- *Overall schedule.* The overall schedule, which takes the place of your lesson plan guide, provides an annotated schedule for each school day. Your daily schedule is determined by your overall schedule, which includes a brief sentence or phrase to indicate what is planned for each section of the day during the duration of the integrative unit. We've included a sample overall schedule in Figure 7.2 to provide you with an example of one way an overall schedule could be designed.

Figure 7.1
Outline for an Integrative Unit

- Overview
- Rationale
- Goals and major concepts
- Daily lesson plans
  - Objectives: What do you plan to teach?
  - Rationale: Why do you plan to teach it?
  - Materials: What resources do you need?
  - Procedures: How will you teach this lesson?
  - Assessment/evaluation: How will you assess/evaluate students, as well as document their learning?
- Learning environment design
- Overall schedule
- Daily schedule
- Family involvement plans
- Resources
  - Visual aids
  - Interactive bulletin boards
  - Documentation/display areas
  - Children's literature
    - Big books
    - Core books
    - Literature sets
    - Poetry
    - Narrative text
    - Expository (informational) text
    - Children's literature software
  - Curriculum guides
  - Textbooks
  - Appropriate computer software
    - CD-ROM encyclopedias and databases
    - Simulation software
    - Information processing software
    - Internet access/Web sites
  - Audiovisual resources
    - Videotapes
    - Laser disks
    - Slides
    - Maps
    - Artifacts
  - Field trip and resource visitor list

Figure 7.2 Overall Schedule



- *Daily schedule.* Base your daily schedule on a six- or six-and-a-half-hour day. Be sure to allow enough time during your classroom workshop blocks for students to become engaged in a variety of large-group, small-group, and individual activities, including activities in learning centers. We've included a sample daily schedule for a primary classroom (first through third grade) in Figure 7.3.
- *Family involvement plans.* Involve families—parents, siblings, and, when appropriate and possible, extended family members—in your integrative unit planning. You might begin or end the unit with a family activity. Invite family members to share a special talent, favorite book, or family artifacts with the class. Students might develop family time lines, interview selected family members, complete surveys at home with other family members, or prepare a favorite family recipe. For example, during an integrative unit on wheels, Therese's children were asked to list all the things that they could

Figure 7.3 Primary Classroom Daily Schedule

8:30–8:45 A.M.	Journal-writing and record-keeping activities
8:45–9:10 A.M.	Opening class meeting: warm-up activities—poetry, songs, etc.; calendar; news of the day; discussion of day's activities
9:10–9:30 A.M.	Shared reading: one previously read book, child-selected, and one core book selected by teacher to complement integrative unit
9:30–11:00 A.M.	Reading/writing workshop: possible options include minilessons for modeling/discussing a new reading/writing strategy or concept; peer and teacher conferencing; literature circles; shared and independent writing activities; guided reading; buddy reading; integrative unit learning center options
11:00–11:30 A.M.	Special areas: physical education, music, art, drama, foreign language
11:30–12:00 P.M.	Lunch
12:00–12:30 P.M.	Outdoor activities
12:30–1:00 P.M.	Read-aloud
1:00–2:30 P.M.	Math/science/social studies workshop: possible options include minilessons for modeling/discussing a new math, science, or social studies concept or strategy; math tubs; science experiments and data collection; problem solving; journaling; peer and teacher conferencing; integrative unit learning center options
2:30–2:45 P.M.	Drop everything and read (DEAR)
2:45–3:00 P.M.	Closing class meeting: review of the day's activities and goal setting for tomorrow

find at home, in their kitchens, that had wheels. Remember, parents are your partners—involve them!

- *Resources.* Resource development is a very important component of an integrative unit. It is not necessary to have a full complement of resources during the planning stages, but it is important to begin thinking about resource cost, availability, balance, and variety at this stage. This section of your integrative unit will be full of lists, diagrams, ideas, and contact information.

Creating Cross-Curricular Connections

In the American educational system, knowledge is generated and assessed within certain long-established discipline areas, such as mathematics, science, social studies, fine arts, language arts, and physical education. However, the separate-subject approach often leaves students with a disconnected view of knowledge, and it fails to reflect the way people attack problems in the real world. This compartmentalization of knowledge creates an educational delivery system that is unrealistic and, often, not engaging for learners or teachers. Curricula should be based on problems, issues, and conflicts that are a part of people's real lives. What's the sense of separating mathematics from science when one provides a powerful set of tools and knowledge that informs the decisions and thinking of the other? As Daniels and Bizar (1998, p. 20) note, "Real living requires us to draw on many domains of knowledge, multiple strategies of thinking, and diverse ways of knowing."

Major Purposes for an Integrated Curriculum

For students to experience and participate in a well-designed and organized integrated curriculum, it's helpful to set priorities and purposes for learning. The following major purposes (Roberts & Kellough, 1996) provide a focus for your development of an integrated curriculum. You'll recognize that each purpose is built on best-practice principles and knowledge about how children and adolescents learn. Integrated curricula are designed to:

1. Teach students to be independent problem solvers
2. Involve students in direct, purposeful, meaningful, and authentic learning
3. Help students recognize that what they learn in different subject areas is interrelated
4. Help students follow their individual interests and take responsibility for their own learning through personalized learning opportunities
5. Design situations in which students learn what they want and need to know rather than what a particular curriculum dictates
6. Encourage students to work with others in cooperative learning situations, such as partnerships and small groups, that focus on the social value of learning

7. Emphasize the process of learning as whole and connected rather than as a series of specific subjects and disparate skills

In addition to these goals, integrated curriculum units should be designed to encourage students to do the following (Pigdon & Woolley, 1993, p. 16):

- Develop understandings through sustained interaction, conversation, or discussion about concepts, ideas, values, and modes of presenting information
- Develop an understanding of the variety of ways in which we can present, represent, and transform ideas about the world
- Build on and extend their personal, out-of-school experiences and knowledge
- Understand the difference between real-world, factual experiences, and exploration of knowledge and fictional, imagined worlds
- Develop a sense of reflection about their world and their environment that leads to action, control, and conservation

Why Is an Integrated Curriculum Important?

A strong theoretical and philosophical foundation for curricular integration has been developed by a number of researchers who have studied a variety of curriculum-related topics. Studies on student inquiry (Beyer, 1985; Costa, 1985), class management in an atmosphere of active inquiry (Harmin, 1994), schema theory (Bruner, 1986; Vygotsky, 1978; Wells, 1986), and the whole-language (or literature-based) approach (Goodman, 1986) all lend support to the assertion that curricular integration is a valuable, reflective, and effective way for teachers to teach and students to learn (Roberts & Kellough, 1996). We explored many of these constructs in Chapter 8 and will continue to discuss many different ways of integrating curricula later in this chapter.

As Pigdon and Woolley (1993, p. 6) explain, "An integrated approach allows learners to explore, gather, process, refine, and present information about topics they want to investigate without the constraints imposed by traditional subject barriers." Integrating the curriculum means including both content and process in the curricular equation. Content subjects (social studies, science) are essentially concerned with ideas about how the world works, whereas process subjects (language, mathematics, art, music) provide a continuum of options for representing how learners make sense of the world. In an integrated framework, product and process are balanced, and learners incorporate both curricular components when learning about a specific topic such as spiders or the Olympics.

Consider the isolated bits of information that were presented to you about a host of different topics throughout your years as a student in elementary and secondary school. Perhaps this anecdote, which recaptures how students in one school were taught about the nation of Japan over an eight-year period, will sound familiar to you and help you recollect how these experiences have affected your own learning.

> *In the first grade, where children often study concepts of the family, their teacher read them stories about families from several cultures around the world; one story was about a Japanese family. A music teacher taught the children a Japanese folk song in the second grade and a traditional Japanese dance in the third grade. In the fourth grade, an art teacher helped the children experiment with origami. The children also studied geographical regions of the world in their fourth grade year; there was some discussion of islands and island nations in that study. Finally, in middle school, the children studied aspects of Asian cultures, including Japanese culture.* (Wood, 1997, p. 4)

Although this may seem like a familiar story, it's not one that you want to repeat when you become a teacher. Why? Many of the theoretical constructs that will help you answer this question were presented in Chapter 8. Every teacher is concerned about students' academic skills and about providing sufficient practice for students in a variety of skill areas. Unfortunately, many of the skills that students learn are practiced in a decontextualized fashion—on a worksheet or in a workbook—that has nothing to do with solving a real-life problem or developing an educational goal. Integrated curricula provide for the application of meaningful skills in meaningful contexts. "Almost any subject . . . is best taught when it is needed to accomplish something else" (Wakefield, 1993, p. 137).

Interdisciplinary Instruction

Interdisciplinary instruction is synonymous with an integrated curriculum. Rather than being subject- or discipline-focused, interdisciplinary or integrative instruction focuses on a central topic. Integrative units of study can be designed for all horizontal levels—preprimary, primary, intermediate, middle school, and secondary school. Since it is important that the topics connect with curricular goals and objectives, the selected focus for different horizontal levels is a major curricular decision. "Me and My Family," "My Neighborhood," or "Small Animals" would be appropriate themes for a preprimary or primary integrative unit, whereas "Communication," "Transportation Through the Ages," "Immigration," or "Mysteries" would be appropriate for an intermediate or middle school integrative unit. Integrative units at the secondary level seem to be most effectively connected across disciplines when they are conceptually focused. For example, secondary students might study equity and diversity as integrative themes connecting American literature, geometry, American history, consumer economics, and wellness.

Some Basic Structures for Curricular Integration

Educators have created a number of terms and structures that can be applied when designing integrated curricula. In this section we present a variety of structures to help you organize interdisciplinary instruction for your future classroom. We've decided to highlight the Project Approach, the Reggio Emilia

Approach, literature-based instruction, curriculum webbing, and learning centers as key structures that you can become familiar with and apply as you design your integrative units.

The Project Approach

A **project,** Katz (1994, p. 1) explains, "is an in-depth investigation of a topic worth learning more about. The investigation is usually undertaken by a small

Figure 7.4
An Example of the Project Approach

The Supermarket

To provide you with an example of the different phases of the Project Approach, we'll focus on kindergarten-aged students. When planning a project that features the supermarket, the three phases would develop in the following ways.

Getting Started

The children and teachers begin by brainstorming a list of all the things they can think of that are found in a supermarket. From this list, they then develop a **curriculum web,** which is a visual diagram of key concepts and activities that they generated in the brainstorming session. It is important to note that the web is an "in-process tool" that can be amended at any time. After creating the web, the teachers ask the children to share what they already know about the supermarket to bridge the learners' prior experiences with the emerging topic. Next, a list of questions, generated by the children and documented in a language chart by the teachers, is created. These questions help to frame the selection of activities, field experiences, resources, and investigations. Teachers plan field experiences, contact experts, and invite parents to participate in the project, as they begin making preparations to move into the second phase of the project.

Field Work

During the second phase of the project, the investigation of the supermarket is in full swing. Teachers and children sketch a visual design for their classroom supermarket. Parents and businesses that have been contacted begin sending empty food containers and sacks. Shelves are organized around categories determined by the children (such as *drinks, cereal, bread, supper,* and *Don't eat*). As additional food containers trickle in, additional categories are suggested. The children create labels, signs, posters, newspaper ads, and money. They also cut, paint, and connect boxes to create the "Kiley Corner Grocery Store." Each day, as the children review the day's activities, teachers record their new questions and listen to their new ideas and suggestions for the next day's investigations.

A few days before the planned trip to the supermarket, several experts visit the classroom. Family members who work in supermarkets, a produce manager, a butcher, a cashier, and a delivery worker might be invited to visit the classroom to share their supermarket experiences. In small groups, children interview the "experts" to find answers to their questions.

Teachers and the children set up a literacy area, which includes children's books about supermarkets and related topics, flyers from supermarkets, posters, ads, videos, and other related resources. During group time, the children explore the materials and discuss their findings.

group of children within a class, sometimes by a whole class, and occasionally by an individual child. The key feature of a project is that it is a research effort deliberately focused on finding answers to questions about a topic posed either by the children, the teacher, or the teacher working with the children. The goal of a project is to learn more about the topic rather than to seek right answers to questions posed by the teacher." Figure 7.4 provides an example of a project.

Finally, it's time to visit a real supermarket. The children board the school bus, armed with their clipboards for sketching their notes and observations. Many parents join the children as they board the bus. Children are in groups of five, with each group chaperoned by a parent, teacher, or other interested adult. The children enter the supermarket with an assignment chosen from the list of questions generated in the classroom. One group interviews the store manager, another visits the frozen food section with their thermometers in hand, and a third group measures the length of the supermarket aisle using a large roll of adding machine tape.

After the exciting supermarket experience, the children work on their representations and dictate their experiences to their teachers and parent volunteers. Early sketches emerge as works of art. Class books, sequenced photograph books, thank-you letters, and supermarket word lists abound in the writing center. The adding machine tape that was used to measure the supermarket aisle is measured again and again using unifix cubes, paper clips, rulers, and string. Teachers and children work collaboratively to take photographs and develop graphs to illustrate the relationships among all the data collected.

For several days, students are actively engaged in acting out their experiences in the "Kiley Corner Grocery Store." Now that the children have accumulated many new experiences and answers to a number of their questions, the store transforms to a new level. New categories are created for the shelves—a bakery, a meat department, a dairy case, a frozen foods aisle, a produce section, a cereals aisle, and a household items section. New price lists are generated, balance scales to weigh fruit and vegetables are requested, and calculators become a necessary tool for creating receipts.

Culminating and Debriefing Activities

After several weeks, the children's interest in the supermarket seems to lose its spark. This is the teachers' cue that it's time to celebrate the project and move on to another exciting topic. The parents, expert visitors, other teachers, and other children in the school are invited to a "Supermarket Celebration." The children create invitations, put finishing touches on their displays, and plan an agenda for the celebration, complete with refreshments. On the evening of the event, children act as hosts for the visitors to their classroom. They gleam with excitement and pride as they show and tell about what they have learned. And the teachers involved enjoy the moment as they begin to think about the next project topic. Although tired, they realize how grateful they are that they decided to become teachers.

(Adapted from Borgia, 1996)

The following theoretical underpinnings serve as the rationale for and foundation of the **Project Approach:**

1. Learners need to make sense of their world.
2. Horizontal relevance is more important than vertical articulation. Perhaps you recall from Chapter 8 that *horizontal relevance* refers to how concepts and topics relate to each other within the same grade level, and *vertical articulation* refers to how concepts and topics at one grade level relate to concepts and topics at different grade levels. Focusing on what students are learning is more important than "getting students ready for the next grade." An overemphasis on vertical articulation may result in "pedagogical paranoia" (Katz, personal communication, 1994).
3. Learners need to develop a disposition for in-depth study.
4. An extended period of time is needed to enable learners to wrap their minds around a topic.
5. Play is a natural way for children to learn, because children are natural-born anthropologists.
6. Learners need opportunities to experience *real* environments.
7. Learners need opportunities to apply skills in meaningful ways.
8. Learners need a continuity of experiences to develop social competence. "If a child doesn't achieve social competence by the age of six, he/she is at risk for the rest of his/her life" (Katz, 1994, personal communication).

What Key Expectations Should a Project Meet?

An effective project meets the following criteria:

1. It involves group discussion.
2. It includes a field experience component.
3. It provides a variety of ways of representing knowledge and comprehension, such as dictation, measurement, sculptures, writing, drawing, and dramatic play.
4. It requires investigation—interviewing; surveying; collecting information by researching books, brochures, databases, pictures, photographs, newspapers, cereal boxes, travel brochures, and other authentic sources.
5. It must include documentation of the processes and products used to complete it. This is an important communication tool for learners, parents, other school staff, administrators, and the community. Documentation can include poster displays, project webs, photographs, labels, videotapes, class books, sequencing activities, portfolios, and language charts.

How Does Project Work Support an Integrated Curriculum?

Advocates of the Project Approach do not suggest that project work should constitute the whole curriculum. Rather, they suggest that it is best seen as

complementary to the more formal, systematic parts of the curriculum. Project work is not a separate subject, like mathematics; it provides a context for applying mathematical concepts and skills. Nor is project work an "add on" to the basics; it should be treated as integral to all the other work included in the curriculum. Project work does the following: provides learners with opportunities to apply specific skills, features learners' proficiencies and strengths, stresses intrinsic motivation, and encourages learners to determine what to work on (and accepts them as experts about their own needs; Katz, 1994).

The Phases of a Project

In Phase 1 of a project (referred to as the Getting Started phase in the Project Approach; Katz & Chard, 1989), the learners and teacher devote several discussion periods to selecting and refining the topic to be investigated. The topic may be proposed by a learner or by the teacher. Once the topic has been selected, teachers usually begin by making a web or concept map, based on a brainstorming session with students. These webs are displayed in the classroom throughout the project and provide a framework for designing the project investigation and selecting specific activities and documentation efforts.

Phase 2, Field Work, consists of direct investigation, which often includes field trips to investigate sites, objects, or events. In Phase 2, which is the heart of project work, learners are investigating, drawing from observation, constructing models, observing closely, recording findings, exploring, predicting, discussing, and dramatizing their new understandings (Chard, 1992).

Phase 3, Culminating and Debriefing Events, includes students preparing and presenting reports on their results, in the form of displays of findings and artifacts, talks, dramatic presentations, or guided tours of their constructions (Katz, 1994). This phase emphasizes the development of documentation, which we discussed in the previous section on key expectations of a project.

Selecting Appropriate Topics

Katz and Chard (1989) discuss the differences between decontextualized teaching and project work. In project work, the course of the project is negotiated by the learners and the teacher. Activities are focused on investigation and are directed by a research question or narrative. Katz and Chard warned that limited topics that do not relate to learners' daily life experiences often result in learners studying unrelated and unfamiliar material. Take, for example, a letter-of-the-week curriculum. "If the theme is 'The Letter M,' the children could . . . draw pictures, read, create, or act out stories about a market, a mouse, the moon, a motor, and so on. Logical, sequential, or cause-effect relationships among the four items cannot be uncovered through active investigation, discussion, interviews of experts, looking things up, and other typical project activities" (Katz & Chard, 1993, p. 210).

Selecting topics definitely is an important dimension of integrating curricula. A number of considerations come into play. Topics should relate to learners' own everyday, firsthand, personal experiences; allow for the integration of a range of subjects or disciplines; provide for the study of objects or phenom-

ena that are real, that will be useful in later life experiences, and that are worth spending time to investigate; incorporate opportunities for problem solving, investigation, collection, cooperation, construction, creation, and dramatic play; and include parents who might be available for direct observation, consultation, and, possibly, field trips (Katz & Chard, 1993).

It's important for project topics to emanate from learners' experiences. It's *critically* important that project topics designed specifically for preprimary- and primary-aged students emanate from the students' direct experiences with the world around them. For that reason, we suggest that you begin by thinking about topics that meet the following criteria: nature, water, community resources, vehicles, buildings, and objects and materials. Avoid topics related to things that are not real (fantasy television or movie characters, stuffed animals, amusement park attractions), the past (dinosaurs, historical events and people), things that are not part of the students' experiential base (outer space, foreign countries), and places or objects not in the children's surroundings (the bottom of the ocean, the rain forest; Borgia 1996).

The Reggio Emilia Approach

Another interdisciplinary structure, the Reggio Emilia Approach, incorporates the Project approach and offers additional vision and depth to the concept of integrated curricula. Because the Reggio Emilia Approach grew out of a parent cooperative movement, it explicitly recognizes the partnership between parents, educators, and children. With the **Reggio Emilia Approach,** children learn through cooperating with other children and their teachers in long-term projects based on children's interests and centered around the creative arts. Topics flow from the children's interests, curiosity, and understandings. Projects and activities are not fragmented. Rather, they build on one another over time, as the children revisit their original work and ideas and refine them using new experiences, activities, and forms of expression. Time is also important in building and sustaining collaborative relationships. Through conscious use of space, color, natural light, attractive and appropriate learning materials, and displays of children's work, the environment serves as another teacher and is inviting to learners, teachers, families, and visitors.

A number of trends in contemporary U.S. education suggest an affinity for the Reggio Emilia Approach (New, 1994). As educators advocate building a professional culture in schools (Lieberman, 1988) that acknowledges the importance of teachers who are empowered as thinkers (Murray, 1986), research on teacher collaboration points to the usefulness of the Reggio Emilia Approach as a strategy for bringing about educational improvement and reform (Ellis, 1990). American educators have much to learn from the Reggio Emilia construct.

Literature-Based Instruction

Literature-based instruction involves using trade books—that is, literature not specifically developed for the education market—as opposed to textbooks (often called basals) in the teaching of language arts and other related areas

Literature-based instruction involves using trade books—literature not specifically developed for the education market. (© Michael Weisbrot)

(Hancock & Hill, 1987; Hiebert & Colt, 1989; Tunnell & Jacobs, 1989; Zarrillo, 1989). Such literature must be the primary, if not the only, reading material used in instruction.

■ Who Promotes Literature-Based Instruction?

Literature-based reading instruction has been promoted by educators with a whole-language perspective toward literacy development (Altwerger, Edelsky, & Flores, 1987; Goodman, 1986; Newman, 1985; Smith, 1971). The **whole-language** philosophy proposes that instruction should keep language whole and involve children in using it purposefully and functionally. Goodman (1986), a leading advocate of this philosophy, states that teachers should put aside carefully sequenced basal readers and encourage students to read books for information, for enjoyment, and to cope with the world around them. Literature-based instruction is supported by a strong theoretical base and extensive research (Giddings, 1991).

The National Association for the Education of Young Children (NAEYC) Guidelines for Developmentally Appropriate Practice are highly compatible with the recommendations of many authorities in the field of whole-language instruction and early literacy (Cambourne, 1988; Galda, Cullinan, & Strickland, 1993; Goodman, 1986; Holdaway, 1979; Routman, 1991; Weaver, 1994). Both sources—the NAEYC guidelines and whole-language advocates—indicate that young children learn to read best in an environment in which they are immersed in language, when they are allowed sufficient time and opportunity to explore a wide variety of written materials and literacy activities, and when instruction reflects their current knowledge level and their attempts to construct new knowledge. Others (Field & Spangler, 1995; Fisher, 1991; Kamii, Manning, & Manning, 1991) also stress the value of children's play as a crucial foundation for literacy.

■ Does Research Support Literature-Based Instruction?

Children who learn to read before going to school, and those who rapidly learn to read once they begin school, have been read to from their very early years. These children have developed a sense of story, and they read for information and enjoyment (Durkin, 1961; Goodman, 1986; Hoskisson, 1979; Newman, 1985). Good readers read for meaning and correct themselves when they make a mistake that doesn't make sense. Also, good readers reread favorite books and thereby develop fluency (Lamme, 1987). Interest, purpose, and

choice are important in the behavior of good readers (Bondy, 1985; Hickman, 1977; Rasinski, 1988).

Children who are taught reading primarily with basal reading programs tend to develop behaviors and notions that are not consistent with the behaviors of good readers. Studies have consistently concluded that children in basal reading programs focus on materials and procedures rather than on meaning. These children place emphasis on decoding, vocabulary, and accuracy (Cairney, 1988; Hiebert, 1983; Johns & Ellis, 1976; Unsworth, 1984).

■ How Does Instruction Differ in a Literature-Based Program?

Instead of beginning with fragments of language, such as letters and sounds, teachers should use complete forms of written language, such as stories, poems, and signs, to develop students' reading, writing, talking, listening, and thinking skills. Teachers should encourage children to determine for themselves whether or not what they read makes sense (Giddings, 1991). Picture a five-year-old beginning reader walking down a familiar street and spotting a small sign hanging on the door of a barbershop that says "Back Soon." If this child is in a kindergarten class in which each letter of the alphabet is presented as an isolated concept and sound, the child might decide that he can't read the sign because he hasn't learned the last letter of the first word yet. Although he will recognize *A, B,* and *C,* he will not attempt to make sense of the sign, because he is limited by his isolated understanding of letters and sounds. But if this child's teacher uses literature-based instruction, in which written language is presented in context and making sense of print is valued, the child will allow the barbershop pole and time of day to guide the invitation that has been presented to him—the invitation to make sense of the sign based on the situation and his vast exposure to letters, sounds, words, and signs. The child in the literature-based classroom has developed the disposition to use his background knowledge while he searches for meaning.

A number of instructional strategies and approaches—including many that you read about in Chapter 9—are implemented in a literature-based reading program. As a teacher, you will need to develop your interests as well as those of your students, be aware of many curricular strategies and options, and ultimately make appropriate choices regarding your literature-based instruction. To get started in implementing a literature-based reading program, consider developing three key dimensions of your reading program: individualized reading with self-selection of reading material and self-pacing, integrative literature units, and core books. We've only scratched the surface of the topic of implementing literature-based instruction. However, there are many excellent resources that will help you begin thinking about creating a vibrant curriculum using literature.

■ What Is a Core Book?

Teachers face many challenges as they make the transition from basal-driven to literature-based instruction (McGee & Tompkins, 1995). One such challenge is determining which pieces of literature will be featured as core books in their

curricula. A **core book** is a literature selection that takes on a central and unifying role in a literature-based curriculum. In your classroom library, you will have multiple copies of your core books, generally six to eight copies of each selection, which will be used in both shared reading and guided reading activities. Jonathan, a middle school teacher, selected *Stone Fox* as a core piece of literature for his classroom. The following brief summary describes the story's theme: "In this story a 10-year-old boy, Willy, must care for his ill grandfather and run their potato farm. Willy manages to harvest the potato crop by himself but learns that the government will take the farm unless he finds a way to pay for 10 years of back taxes. Willy wins the needed money in a dog sled race with the sacrifice of his faithful dog, Searchlight, and with the help of *Stone Fox*, a Shoshone Indian" (McGee & Tompkins, 1995, p. 405).

Jonathan uses a core literature approach (Zarrillo, 1989), selecting literature that is closely tied to his social studies program. He includes *Stone Fox* in an integrative unit in which his students read a variety of poetry, information books, and folklore related to several American Indian tribes (McGee & Tompkins, 1995). Since the theme of Jonathan's integrative unit is American Indians, he selects core literature that integrates and develops that theme across the curriculum.

■ Selecting Literature

Using trade books in instruction enhances both literacy development and learners' interest in reading (Hoffman, Roser, & Farest, 1988; Morrow, 1992; Morrow, O'Connor, & Smith, 1990). There is much value in exposing students to the natural language used by writers of children's and adolescents' books (Giddings, 1991). Moreover, the illustrations provide aesthetic, creative, and original perspectives on a myriad of topics and concepts that are meaningful to students.

So where do you begin your quest for exciting and appropriate literature? You may have been fortunate enough to have taken a dynamic children's or adolescents' literature course during your teacher preparation program. But whether or not you have taken such a course, you need to discover your personal connection to literature written for children, adolescents, and young adults. What types of books do you enjoy? Who are your favorite children's authors and illustrators? What books make you laugh? What books make you cry? We know many teachers who are passionate about children's literature—including us! Once you catch the children's literature bug, you will find yourself wandering through bookstores and libraries at all hours of the day and night.

The following literature selection guidelines are just a starting point for thinking about beginning your literature resource development. Since we have taught children's literature courses for a number of years, we have discovered that preservice teachers who begin choosing appropriate literature to support their units and projects generally have a fairly extensive collection of resources, and an even more extensive wish list, by the time they complete their teacher preparation program. Many of our students share lists of their favorite literature requests with their families and friends and put children's and adolescents' books at the top of their birthday and holiday wish lists.

Literature Selection Guidelines

- Choose literature from every genre—folk tales, fables, and myths; poetry; fantasy and science fiction; modern fiction; historical fiction; biographies; and informational books—and check to see that your collection is balanced.
- Choose picture books that represent a variety of artistic media and techniques: watercolor, charcoal, oil paint, collage, photographs, sketches, and so on.
- Choose books that represent a variety of authors and illustrators.
- Choose books that represent all cultures, genders, and age groups, and once again, check to see that your collection is balanced.
- Choose big books, when appropriate, to support your literature-based shared reading program.
- Choose books that support and extend your integrative unit goals and objectives.
- Choose books that are appropriate for reading aloud, shared reading, guided reading, and independent reading.
- Choose some books that can be extended in the technology center through audiotapes, videotapes, and computer software.

In addition to the guidelines listed here, in the Relevant Resources for Professionals section of this chapter we've included some of our favorite resources for choosing quality literature. Please understand that this is a very brief representation of the resources that are available to you, but this list provides you with a good starting point for researching literature written for children, adolescents, and young adults.

■ Be Aware of Your Cultural Perspectives and Biases

Since one of the most visible changes occurring in literacy instruction today is the expanded use of literature, it's likely that this focus will continue to expand into the next millennium. Unfortunately, literature-based literacy programs are disturbingly alike in one significant respect—lack of cultural understanding on the part of teachers. This "cultural gap," a void in teachers' knowledge base about culture as it relates to literacy and literature, is a profound problem.

The need for educators to understand and deal with the cultural dimensions of learning and teaching is a growing concern for American education (Giroux & McLaren, 1986; Trueba, Jacobs, & Kirton, 1990; Willinsky, 1990). Equitable and effective literature-based instruction cannot grow magically from teachers' good intentions or incidentally from their extant professional knowledge (Barrera, 1992). The key to developing cultural understanding is to accept the idea that "it is culture, not biology, that shapes human life and the human mind" (Bruner, 1990, p. 34). Human beings are cultural beings, shaped or constituted by culture—but also involved in shaping and generating culture (Geertz, 1973). People are not born *with* culture but are born *into* a culture, and their entry into meaning is through that culture. Culture is not the soli-

tary invention of the individual; it is learned and social (Bruner, 1990; Peacock, 1986).

From a multicultural perspective, we can identify a number of potential curricular and instructional problems. First, the core literature is often dominated by topics and characters that do not reflect the faces, experiences, and histories of children from a variety of cultures. There is a marked homogeneity that renders some children's lives and experiences invisible. Second, even when "multicultural" literature *is* featured, the authors and illustrators are often mostly English-speaking European Americans, with little of the core literature written or illustrated by individuals from other linguistic or cultural backgrounds (Barrera, 1992). We offer the suggestions in Figure 7.5 to assist you in selecting literature that is diverse and appropriate for your future classroom.

Curriculum Webs

To design and implement an integrative unit, teachers need much more than a topic. Decisions must be made about the focus of topics, instructional goals, and strategies (Lipson, Valencia, Wixson, & Peters, 1993). Achieving a balance between concepts and processes, as well as between learner-initiated and teacher-initiated activities, is no small task. In addition, teachers must be concerned about including a variety of grouping structures—small-group, large-group, and individual learning experiences (Goetz, 1985).

Webbing helps learners gain insights into relationships between ideas and concepts. Through this process, students can begin to apply critical and creative thinking skills and strategies.

■ Getting Started with Curriculum Webbing

The following four-step process, adapted from Barclay, Benelli, Campbell, and Kleine (1995), will help both novice and experienced teachers develop engaging and productive topic cycles.

1. *Identification of a topic and related subtopics*
   - Is this a topic that learners are naturally curious about?
   - Do learners already have some understanding of, and experience with, this topic?
   - Will learners gain new knowledge and understanding about their world and its people from participating in this unit?
   - Does the topic lend itself to incorporating learning experiences from most, if not all, curricular areas?
   - Does the topic lend itself to the exploration of a variety of related subtopics?
   - Will there be ample resources available for this topic?
2. *"Topicstorming"*
   - Are most, if not all, curricular areas represented?

Figure 7.5
Promoting Diversity Through Your Literature Selection

Check the illustrations.
Look for stereotypes. Are females always depicted in domestic roles, or are Native Americans depicted as savages?

Look for tokenism. Do all minority faces look alike, or are they individuals depicted genuinely, with distinctive features?

Check the story line.
Standard for success. Is "making it" in the dominant white society projected as the only ideal?

Resolution of problems. How are problems presented, conceived of, and resolved in the story?

Role of women. Are the achievements of girls and women based on their own initiative and intelligence, or are they attributed to their good looks or their relationships with male characters?

Look at the lifestyles.
If the illustrations and text attempt to depict another culture, do they go beyond oversimplifications and offer genuine insights into other lifestyles?

Weigh the relationships between people.
Are relationships between individuals of differing cultures, as well as relationships between family members, depicted appropriately?

Note the heroes and heroines.
Are all cultures, genders, and age groups represented in your children's literature collection?

Consider the effects on a child's self-image.
Are norms established that could limit any child's aspirations and self-concept?

Consider the author's or illustrator's background and perspective.
What qualifies the author or illustrator to deal with a particular topic?

Watch for loaded words.
Examples of loaded words, words that have insulting overtones, include *savage, primitive, conniving, lazy, superstitious, treacherous,* and *crafty.*

Check the copyright date.
Do the text and illustrations accurately depict a current and balanced perspective on the topic?

(Adapted from Hendrick, 1992, pp. 605–607)

- Is there a balance of experiences: inquiry activities, shared reading and writing, independent reading and writing, oral sharing, and reading aloud?
- Is there a balance of small-group, large-group, and independent learning experiences?
- Are there both indoor and outdoor experiences?
- What additions can be made to the present learning centers to enhance the unit?

- What new centers or learning stations need to be created?
- What long-range projects might the students pursue?
- Are there outside visitors, field experiences, or computer resources that might enhance this unit?
- How will learners' families be involved in the unit?

3. *Identification of desired learning outcomes*

   - What specific knowledge might learners acquire during this unit?
   - What process knowledge or skills might learners gain through their participation in this unit?
   - What habits and attitudes might learners develop as a result of their participation in this unit?

4. *Preparation for teaching*

   - What initiating and culminating activities might be used?
   - How might the classroom be arranged to facilitate learner interaction during this unit?
   - Have I collected the necessary literature, poems, manipulatives, technology, and other resources?
   - How will I assess student learning throughout the unit?
   - How will I evaluate the effectiveness of the learning experiences within the unit?
   - What collaborative learning or other grouping arrangements will students need to use? What can I do to facilitate this?

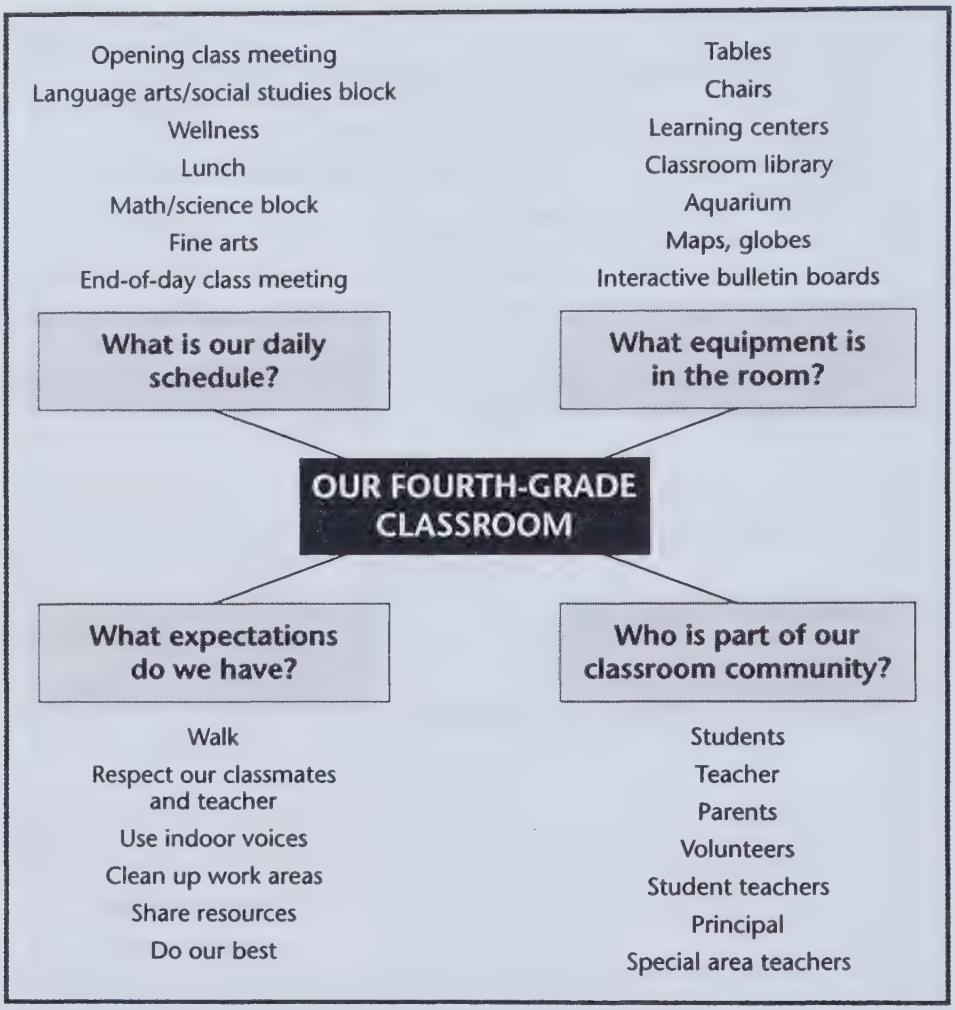
Including Learners in the Webbing Process

Incorporating learners' interests, background knowledge, experiences, and questions is key to the development of a theme/topic/concept web. You might consider beginning the year with a web about your classroom to help students understand how they will be encouraged to learn:

1. Brainstorm a list of rules, ideas, questions about, and equipment related to, for example, "Our Fourth-Grade Classroom."
2. Write the words *Our Fourth-Grade Classroom* in the center of a large chart.
3. Ask students to add related information to the web, connecting it to the center box. This information is typically taken from the brainstorming list, which learners can refer to during the webbing session.
4. Ask the students to add more supporting details to expand the web. See Figure 7.6 for an example of a class web.

This example can be used as a model for making individual webs or other small- or large-group webs. Once students feel comfortable with the webbing process, they can help in developing curricular webs during the initiation phase of each new integrative unit.

Figure 7.6
Sample Class Web



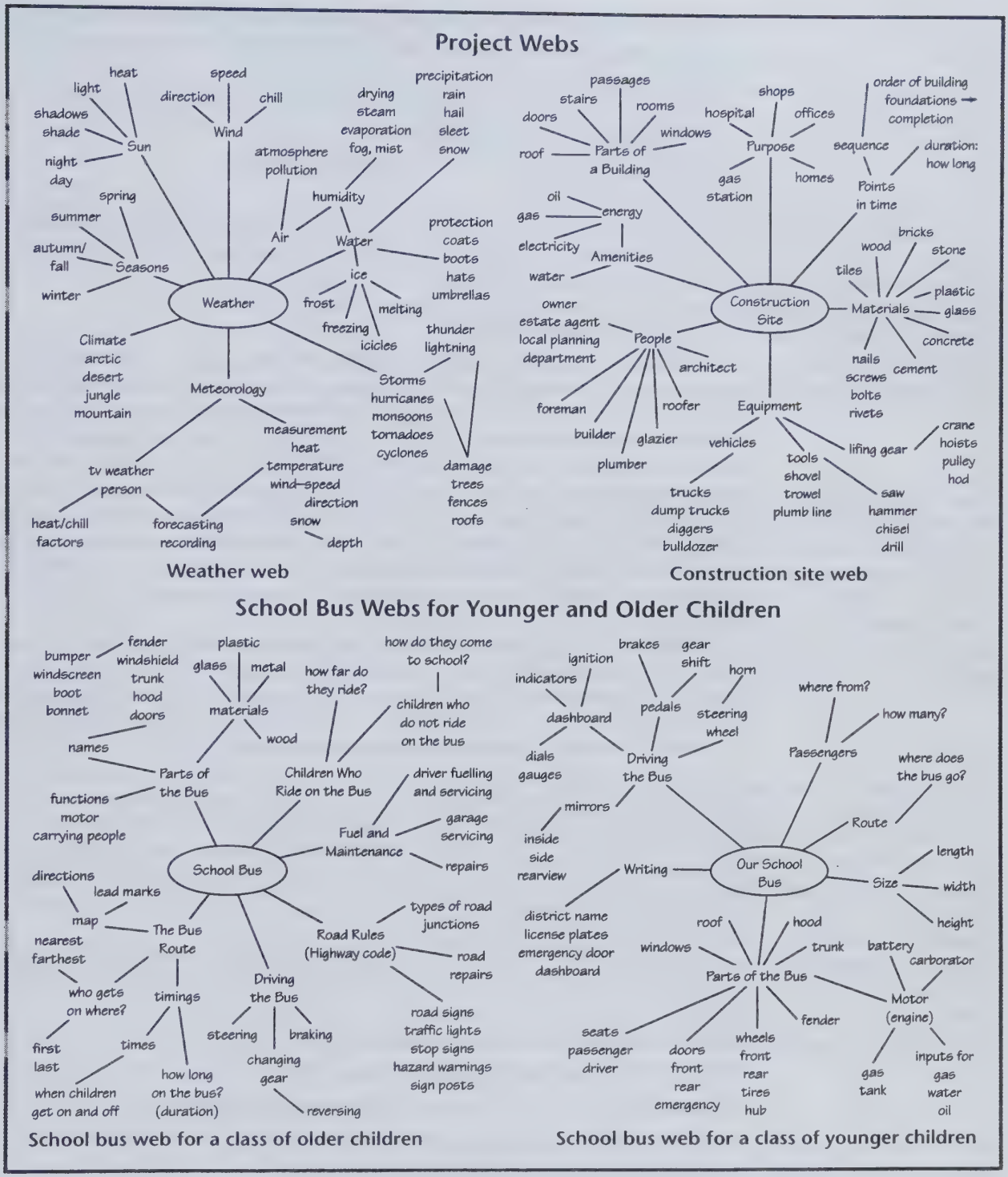
There are many ways to develop curriculum webs. The more comfortable you are with webbing, the more you will use this organizational method in your classroom. Figure 7.7 offers some examples.

Learning Centers

Walk into Debra Kunze's second- and third-grade classroom in the middle of March, and you might observe the following learning center design (Daniels & Bizar, 1998, p. 90):

- A writing center, where students pursue their own writing projects
- A math center in the form of a store with priced items, play money, cash registers, sacks, and receipts

Figure 7.7 Project Webs and School Bus Webs



(Katz & Chard, 1989)

- A measurement center, where students test various attributes of water as well as measure volume and temperature using a variety of measurement instruments
- A "geosafari" center, where students use computer software to find the locations of countries around the world
- A physics center, where students design simple machines and bridges, which are tested for strength

As you visualize your journey around this exciting classroom, think about what the students are learning as they are engaged in center activities for approximately an hour each day.

What Are Learning Centers?

For a more formal definition of **learning centers,** Daniels and Bizar (1998) suggest the following: "Centers or learning stations are special spots in the classroom where the teacher has set up curriculum-related activities that students can pursue autonomously" (p. 91). In Chapter 6 we discussed the importance of designing appropriate learning environments and provided you with samples of learning environment designs. A classroom design that incorporates learning centers is a critical dimension of your curricular plan. For that reason, we invite you to begin thinking about how learning centers in your future classrooms will complement and support your curricular topics, goals, and objectives. A learning center design should be developed as part of each integrative unit you create.

There are several types of learning centers. Simple interactive learning centers can be created using a bulletin board with pockets for written directions. Learning centers also can be displayed on an empty shelf or other flat surface in the classroom. In more elaborate centers, materials and activities are arranged in designated areas in the classroom (Wood, 1997).

Learning centers often are key components of minds-on/hands-on preprimary, primary, intermediate, middle school, and secondary classrooms. However, we believe that learning centers are *essential* elements of learning environments for preprimary- and primary-aged learners, since children from birth to age eight learn most effectively through sensory and motor stimulation. Therefore, elaborate learning centers are necessary in preprimary and primary classrooms.

The following list (Isbell, 1995) emphasizes many of the reasons learning centers are essential for these age groups. While engaged in learning centers, students:

- Make choices and develop confidence in their problem-solving abilities
- Expand their oral and written communication skills
- Enhance their creative abilities, determining the direction of their learning
- Select a variety of resources based on their interests
- Develop social skills as they work with others
- Experience a variety of roles and learning perspectives

- Develop responsibility
- Set goals, develop plans, and perform a task to completion
- Develop longer attention spans and the ability to focus while engaged in active learning pursuits
- Enhance their self-image as they learn that they can influence their world by participating in a variety of learning centers

Because developing learning centers is an important and time-consuming task, we have provided you with some details about a variety of learning centers. It's our hope that you'll be able to picture these centers in your mind and develop a lot of ideas and positive energy that will motivate you to design stimulating and engaging classrooms. Although the learning centers you select should support your curricular goals and objectives as well as reflect the interests of your students, it is important to include some of the following centers in a classroom for preprimary- or primary-aged learners, regardless of the curriculum or students.

■ A Family Living Center

The family living center is an essential component of any preprimary or early primary classroom. This area provides the perfect transition from home to school. Young children are familiar with the roles and materials they will discover and develop in the family living center. In this safe environment, children can play out their ideas, role-play their experiences, and experiment with a variety of authentic props (Isbell, 1995). Some materials to include in a family living center are kitchen appliances, a small table with chairs, cooking utensils, empty containers that promote the discovery of environmental print, and a collection of dress-up clothes that represent a variety of cultures.

■ Math/Block Center

For over 150 years, blocks have been essential in classrooms for young children (Isbell, 1995). Block play enhances all areas of children's development, including physical, motor, social, and cognitive domains. The block center is designed to facilitate active construction, the discovery of mathematical and spatial relationships, the connection of print to actual objects and actions, and the development of positive social relationships. Many props can be added to the block center, including math manipulatives, to give children an opportunity to connect blocks with other materials to promote mathematical, logical, and spatial development. Some materials to include in a block/math center are a set of unit blocks, miniature multicultural people, miniature animals, miniature transportation vehicles, a variety of math manipulatives, and a large piece of carpet to cover the flooring (for sound absorption).

■ Art Center

As children paint, sculpt, and draw in the art center, they experiment with a variety of different media and begin to understand their world as they develop a number of skills and act on many creative ideas. The process of creating is

more important than the products the children develop (Isbell, 1995). The art center should be a place for exploration and discovery, risk taking, and dream making. Some materials to include in an art center are an easel; a water source; a variety of painting and drawing tools such as paintbrushes, sponge brushes, paint rollers, Q-tips, and popsicle sticks; scissors; glue; and paste.

■ Sensory Center

Exploration and experimentation with a variety of natural materials—sand, water, rice, corn—take place in the sensory center. As children interact with the sensory materials, they refine their coordination and develop new approaches for successful use of a myriad of tools (Isbell, 1995). Children's interest in this center makes it an effective place to increase their attention spans while they are involved in a number of skill-based thinking and social activities. Some materials to include in a sensory center are a sensory table (many different varieties are available); shower curtain liners (place on the table tops and on the floor under the sensory table); a small broom and dust pan; sterilized play sand; colored water; rocks, pebbles, pieces of wood, and shells; and funnels, a strainer, sponges, and straws.

■ Library Center

The library center should be designed to hook children into books and capture their interest in a variety of related resources. It should include a listening area with audiotapes, a flannelboard area with storytelling media, and a relaxed reading area. Books should be displayed so children can see the covers and easily select books that appeal to them. Soft pillows, stuffed toys, quiet music, and cozy quarters enhance the library center environment.

Some materials to include in a library center are a well-balanced, culturally diverse collection of appropriate children's literature, children's magazines, a cassette tape player or CD player, headphones, and books with tapes.

■ Writing Center

The writing center provides a special place in the classroom that is reserved to promote the writing of young children. An interest in writing and communication is critically important for young children. In this center children write lists and letters; create books, recipes, phone books, invitations, and signs; copy text from children's literature or displayed language charts; create new words and patterns; and experiment with a variety of writing media. Some materials to include in a writing center are a typewriter, word processor, or computer; magic slates, chalkboards, or wipe-off cards; a variety of writing tools; glue; scissors; classroom post office with mailboxes for each child; a variety of types of paper; construction paper; newsprint; and tagboard.

■ Music/Movement Center

A music/movement center is an area where children can experiment with a variety of media that create rhythmic and musical tones and sounds and inspire a wide range of movement. In this center, children become musicians and

dancers who compose their own music, create their own movements, and joyfully share their musicality with their peers and teachers. Some materials to include in a music/movement center are rhythm instruments (rhythm sticks, sand blocks, wood blocks, drums, triangles), bells, shakers, a cassette or CD player, and music from different cultures, with appropriate instruments.

■ Science/Discovery Center

Young children are curious about the things in their world. Encourage their inquiry into the natural world with a science/discovery center, where children become scientists who observe, examine, compare and contrast, collect and analyze data, and draw scientific conclusions. The science/discovery center invites children to engage in wondering and questioning, thinking and imagining. Some materials to include in a science/discovery center are magnifying glasses, plastic gloves, an aquarium (for fish or plants), class pets (hamster, guinea pig, hermit crabs, bunny), and clear plastic jars with lids.

■ Social Studies/Museum Center

In a museum center, social studies concepts are developed and displayed. Family timelines, favorite foods from around the world, famous Americans, the Statue of Liberty, and train travel are all topics that could be developed in a museum center. The major focus of this center is to provide opportunities for learners to connect with their community and develop an appreciation of how history and geography affect their world. Some materials to include in a social studies/museum center are photographs, artifacts, reproductions, timelines, displays, and maps.

■ Technology Center

In a technology center, learners engage in activities that are both intriguing and accessible. A variety of appropriate software, as well as peripheral tools that support the needs of diverse learners and learning styles, are essential features of such a center. One of the powerful services teachers can provide by means of computers and technology support materials is to give students a "microworld." A microworld is a software program that lets children play and discover concepts and cause-effect relationships in a virtual environment constructed specifically for this purpose. It serves as a bridge between hands-on experience and abstract learning, letting children learn about a topic through exploration and experimentation that they could not perform in the real world (Papert, 1980; 1993). Microworlds are harder to find than drill-and-practice programs, but the simulations they provide—as long as they are developmentally appropriate for the learners using them—are much more valuable than drill software (Davis & Shade, 1994). One example of a microworld program is EZ Logo, which is often used to introduce young children to geometric concepts.

A number of assistive devices may be necessary to make the technology center accessible to all students. A TouchWindow screen, special switches, an

A variety of appropriate software, as well as peripheral tools that support the needs of diverse learners and learning styles, is an essential feature of a technology center.
(© Michael Zide)

IntelliKeys keyboard, and a variety of other adaptive equipment and software are available from a number of vendors. Some materials to include in the technology center are a computer with a color monitor, color printer, microphone, mouse, joystick, and CD-ROM player, CU-See Me cameras, digital cameras, headsets, software, and instructions for accessing the Internet.

■ Other Learning Center Options

We've discussed in detail a number of typical learning centers for preprimary and primary classrooms to get you thinking about the purpose of each type of center, but the lists and rationales we've provided are only starting points. We're confident that you can add many more ideas and infuse your own creativity into designing a myriad of appropriate learning centers for your future classroom. In addition to the centers we've suggested, a number of other options exist, depending on your interests, the interests of your students, and your curriculum.

For example, if you are engaged in an integrative unit on construction, you might want to develop a woodworking center for your classroom, or if food is the featured topic, you might want to set up a separate cooking or restaurant center. Many fast-food restaurants will provide teachers with environmental print and props to enhance classroom learning centers. Certain unit topics lend themselves to the development of sociodramatic centers in which students learn about a topic by engaging in a variety of social role-playing activities. Suggestions for sociodramatic centers include a grocery store, hospital, bakery, shoe store, gas station, train or bus station, garden shop, pet shop—the options are endless. If you're preparing to teach in a middle level or secondary

classroom, you can take many of the learning center options that we've provided to create your own connections, designs, and materials lists.

The Role of Collaboration in Integrative Unit Planning

If you've wondered whether thinking up unit topics and creating curriculum webs might be more fun and productive if you teamed with other teachers, we'd like to say yes, go for it! Teaming with other teachers to brainstorm concepts and categories, come up with activity and assessment ideas, and share resources is one of the most productive and enjoyable ways to develop integrative units. By encouraging colleagues to engage in creative thinking and to exhibit their flexibility, fluency, creativity, and originality, you are providing opportunities to think and plan collaboratively with them. James Watson emphasized the benefits of collaboration with his observation that "Nothing new that is really interesting comes without collaboration."

One of the biggest problems teachers have in planning an integrated curriculum is lack of time. You must be committed to finding opportunities to team with colleagues as you plan integrated units. Special subject area or resource teachers (for example, art, music, drama, computer, foreign language, library/media, physical education/health, gifted, and special education teachers) must be involved in the planning process and must be encouraged to buy in to the importance of integrated units.

How can schools develop and support teaming opportunities for busy teachers? Weekly horizontal team meetings are a great way to begin. All teachers (special area, special education, and regular education), assistant teachers, and an administrative liaison (such as principal, assistant principal, lead/mentor teacher) meet every week for one hour to discuss curricular integration across grade levels. The meetings are held at the same time each week, and teachers are paid to meet and plan. For example, the primary horizontal meeting includes all staff involved with students from prekindergarten through second grade; the intermediate horizontal meeting includes all staff involved with students in the third and fourth grades; the middle school horizontal meeting includes all staff involved with students from fifth through eighth grade; and the secondary horizontal meeting includes all staff involved with high school students. This structure may be altered depending on the size of the district, the curriculum and assessment design, and the district grade-level divisions.

However, the focus of these weekly meetings is not up for negotiation. The driving force behind the weekly meetings is the goal of developing an integrated curriculum and assessment program that involves and challenges each and every staff person, as well as each and every student in the building. It is imperative that a written report be submitted to the principal and district cur-

riculum coordinator or curriculum committee chair each week. This report serves to keep the lines of communication open and fluid—conditions that are necessary to support and enhance change and curricular growth.

Issues Surrounding Integrative Units

In Chapters 8 and 9 you explored some important concepts and heard some compelling teacher stories dealing with designing curricula. We also discussed a number of instructional strategies and approaches for delivering and developing curricula in the context of the classroom.

Our experience, and that of many other teachers, has made it clear that one of the most important abilities you must develop before you can plan integrative units and create connections for students is to be able to explain why you teach in this way. From your very first job interview, you will be asked to articulate your philosophy of teaching. Embedded within that philosophy must be a passion for creating connections for your students. The words, expressions, attitudes, and knowledge you share with parents, colleagues, administrators, and your students will make or break your opportunities as a teacher to create curricular connections through the development of integrative units.

"Yeah Buts" and Integrative Units

If integrative units are so important for both teachers and students, then why don't more teachers implement them? Perhaps the "yeah-but" that is most often recited for not implementing an instructional innovation is the lamentation, "Yeah, but my principal won't let me!" Although this "yeah-but" sometimes appears in slightly altered form ("Yeah, but our school district won't let us"; "Yeah, but our curriculum guides aren't set up that way"; "Yeah, but other teachers in my building don't teach that way"), the message is still the same. These "yeah-but" teachers, when asked how they know their principals won't let them, often don't have a definitive answer. In fact, in most cases they have not asked their principals about the possibility of implementing the practice in question.

For example, in Rita's first year of teaching, she didn't like using the spelling book she'd inherited from the previous fifth-grade teacher. However, since the books had been ordered and district funds had been sacrificed to pay for them, Rita felt compelled to use them. She reached that conclusion in spite of what she knew about the importance of offering contextualized instruction, providing authentic experiences, and integrating and connecting the different components of the language arts. She also reached that conclusion in spite of the spelling series' decontextualized "sneaky phonics" approach, which featured graphemic patterns (for example, *weigh, sleigh, way,* and *slay*) to the exclusion of

meaningful connections. Eventually Rita summoned her courage and timidly inquired of her colleagues, "Why do we use these spelling books?" Her well-intentioned colleagues replied, "Because the principal says we have to."

Since she had been teaching for only a few months and consequently had not been completely inculcated into the politically correct mode of operation, rather than dropping the matter, Rita took it to the principal. Perhaps being young and naive has its virtues. Rita simply asked, "Do I have to use the spelling books?" The principal simply replied, "No." (He was a man of few words.) Being young and naive also has its drawbacks. In retrospect, Rita should have asked a second question: "May I use the money that would have been spent on spelling books to purchase trade books instead?" With that experience, Rita's schema for "live and learn"—otherwise known as "don't give up something without getting something in exchange"—was created.

Other "yeah-buts" you may encounter on the subject of creating and implementing integrative units include, "Yeah, but it takes a lot of time to design units, and we don't have enough time to eat lunch, let alone collaborate on units"; "Yeah, but you need lots of money to do that right, and we don't have lots of money"; "Yeah, but to do it right I'd need to collaborate with the other teachers in my building, and they aren't interested"; "Yeah, but parents won't understand or support curricular integration since they turned out fine without it"; and "Yeah, but I've taught thirty years without units, and I can teach another two years without them and then retire." Although we promise not to provide a story to go with each of these "yeah-buts," we list them here to demonstrate that change produces resistance to change. If you go looking for reasons not to implement an innovation, then that's what you'll find. However, it's also true that if you go looking for reasons why you *should* implement an innovation, then you're sure to find those, as well.

Benefits of Integrative Units

Concentrate for a moment on positive memories you have about learning new concepts, ideas, or processes in school. What do you remember most about being a kindergartner, a third grader, a sixth grader, or a junior in high school? Are the facts about photosynthesis paramount in your memory bank, or is it easier for you to remember the field trip to the botanical gardens that was organized as a culminating activity? Do you recall which day you learned what letter of the alphabet in kindergarten, or do you remember the day you created an erupting volcano at the science center (to help you remember the letter *V,* of course)?

To help you support your decision to use integrative units when speaking with colleagues, administrators, and parents, we now discuss some of the reasons why designing and implementing such units is important. Integrative units that are developed using themes or topics

1. Facilitate and stimulate natural and authentic learning experiences for students and teachers

2. Build on student interest
3. Provide a meaningful context for the development of curricular objectives across all grade and developmental levels
4. Facilitate curricular integration

For example, an integrative unit on money could provide many real-life applications. Do you remember a time when Grandma gave you a dime but gave your sibling two nickels? You threw a fit, right there in the middle of the candy aisle, because you thought Grandma had given your beloved sister or brother "more" money than you. Certainly a scenario such as this constitutes a real-life application of the concept of money and a situation students can relate to. That makes it real—authentic (Reason #1). Because it's real, it carries with it a naturally occurring, built-in motivation for learning. The situation gets your attention and holds your interest (Reason #2). Obviously, you'd rather not believe that Grandma loves your sibling more than she loves you. Surely, there must be another explanation for why she gave that brother or sister more money than she gave you. If you could comprehend the fact that one dime equals two nickels, you could then place it in a meaningful context (Reason #3) and apply it to that context. Of course, that would provide an acceptable explanation. Grandma loves you the same, because one dime is the same as two nickels. Armed with the awareness that the concept of money holds real-life significance for you, a clever and informed teacher could have used that hook as a launching pad for an instructional unit that integrated the curriculum via the concept of money (Reason #4).

A kindergarten teacher might decide to do an integrative unit on "neighborhood restaurants" (such as Pizza Hut, Burger King, or McDonald's). Why is it important for kindergartners to learn about the concept of money? Certainly, they should be exposed to how the market economy works and the way people use money to purchase things they need and want. A unit on neighborhood restaurants could provide authentic exposure to the concept of money right in the classroom, which could include a center designed as a Pizza Hut, complete with student-made menus, cash registers, money, pizzas, pitchers of soda, and red-checkered tablecloths. This would give students an opportunity to engage in social studies (dramatizing the role of the consumer and of restaurant workers), math (adding check totals, making change, and creating checkered tablecloths), language arts (writing and reading the menu, taking orders), and science (designing the cardboard box that serves as an entryway and the crate that functions as an oven).

A fourth-grade teacher might develop an integrative unit on community businesses and support students in their analyses of the supply-and-demand contrasts that exist among area businesses. For example, drought impacts the price of produce, and a work stoppage affects the supply of available new cars. Certainly, these analyses would involve an understanding and application of the concept of money. A middle-school or secondary teacher might ask students to create their own businesses and outline a one-year projection of income and expenses. Once again, a well-developed understanding of the

concept of money, as well as economic forces, is critical to the classroom application of this unit.

Planning: Process and Product

We devoted the first half of this chapter to a fairly extensive discussion of the multifaceted task of connecting different parts of the curriculum and developing integrative units. However, we intentionally kept our focus on the goal or product of planning (the what) and the instructional benefits of creating connections between curricular components (the why). In the second half of this chapter we turn our attention to the different levels and processes of instructional planning (the how).

Levels of Instructional Planning

As you may recall from Chapter 3, planning is one of the four roles of leadership. Teachers engage in planning on a daily basis, and instructional planning constitutes a major portion of the planning teachers do. Although teachers tend to focus primarily on day-to-day instructional planning, there are actually three types of planning teachers need to address: long-range planning, mid-range planning, and short-range planning.

■ Long-Range Planning

Long-range planning is the most comprehensive type of instructional planning, as well as the type of planning that teachers are most likely to neglect. Long-range or yearly planning identifies the general curriculum content and its sequence, which typically are framed by district curriculum objectives. Teachers who engage in long-range planning generally include ordering and reserving instructional materials as part of the planning process, in addition to identifying the instructional scope, sequence, and annual learning goals (Glatthorn, 1993).

■ Mid-Range Planning

Mid-range planning includes term and unit planning. As you already know from the first half of this chapter, unit planning results in well-organized, sequenced, integrated learning experiences based on student interests, prior experiences, and instructional needs, as well as on established curricular goals. Term planning involves outlining the content and skills to be included in the next three months and creating a weekly schedule that supports the term's goals and priorities (Glatthorn, 1993).

■ Short-Range Planning

Short-range planning consists of weekly and daily lesson planning. Weekly planning includes developing and organizing the week's lesson plans within

the framework of the established weekly schedule, whereas daily lesson planning involves organizing the learning environment and materials for the next day, making last-minute decisions, and adjusting the schedule to fit last-minute changes or special events such as picture day and assemblies (Glatthorn, 1993). For better or worse, teachers tend to focus the majority of the energy, attention, and time they devote to instructional planning on short-range planning.

The Instructional Planning Process

Planning typically improves results for any activity. Instructional planning provides a sense of direction for both teachers and learners and lets students know about the learning tasks they're performing and become aware of the goals embedded within those tasks. For purposes of analyzing the instructional planning process, we'll discuss four key components of planning: purpose, structure, assessment, and alternatives.

■ Planning the Purpose of Instruction

Goals, objectives, or intended accomplishments constitute the purpose of instructional plans, and "the most effective plans begin with some conceptualization of intended learning outcomes" (Pellicer & Anderson, 1995, p. 79). However, we need to acknowledge that achieving certain educational goals or objectives is not always the impetus behind instructional planning. Teachers sometimes develop "survival plans," with the primary purpose of keeping students busy or in their seats and quiet. Some teachers also engage in activity-oriented instructional planning. Activity-oriented plans have no identified desired outcome. Nonetheless, teachers plan and implement activity-oriented instruction in the hope that students will learn something from it, recognizing that different students may learn different things from the same activity (Pellicer & Anderson, 1995).

■ Planning the Structure of Instruction

Planning the structure of instruction refers to selecting specific instructional activities and resources for a particular plan, as well as determining how the instruction will be sequenced. Examples of instructional activities include discussions, use of learning centers, simulations, and problem solving activities. Instructional resources include items such as computers, videos, overhead projectors, books, rulers, calculators, glue, and paper.

As you know, sequencing of instruction implies that certain concepts, skills, or activities must precede other concepts, skills, or activities. There are several approaches to sequencing. One is task analysis, which "requires identifying the prerequisite knowledge and skills that are needed by students to achieve a particular goal. Once these prerequisites have been identified, they are sequenced accordingly. The major assumption underlying task analysis is that knowledge and skills exist in some type of hierarchy and that learning occurs as students move from lower positions on the hierarchy to upper ones.

Thus, task analysis is based on a somewhat bottom-up approach to learning" (Pellicer & Anderson, 1995, p. 79).

Advance organizers are another sequencing tool. Because they provide context for the instruction that follows, they're particularly appropriate for instruction that focuses on concepts. Advance organizers are more general, abstract, and inclusive than the instructional concepts they precede. As such, they represent a top-down approach to sequencing. For example, you might choose to use the concept *land forms* as an advance organizer to introduce the concept of *plateaus*. *Land forms* is an appropriate choice as an advance organizer for *plateaus* because it is a more general concept that encompasses the narrower concept of *plateaus*.

Now, take a moment to consider how the principle of advance organizers relates to schema theory. Recall that schema theory holds that the way people learn and remember is directly affected by their prior experiences and that learning can be positively affected by creating connections between new learning and prior learning and experiences. Advance organizers are an attempt to help learners connect what they know to what they're about to learn. They help learners know what mental "file" to put the new information in, how to store it, and what prior experiences and previous learning to connect to it so they'll be better able to retrieve it when they need it.

Other approaches to sequencing emerge from the subject matter. For instance, chronological sequencing involves presenting material in an order that corresponds to the order in which certain events (such as historical events) occurred. Conceptual sequencing involves ordering based on relationships among a subject matter's concepts. For example, in mathematics, addition typically is taught before multiplication, since multiplication builds on the concept of addition and basically is a fancy form of addition. Science also uses conceptual sequencing (for example, classification), as does social studies (for example, neighborhood, city, state, country); (Pellicer & Anderson, 1995).

■ Planning Assessment and Evaluation

Assessment and evaluation make up another critical planning component. Process evaluation measures the degree to which instructional plans have been implemented successfully. Product evaluation measures the degree to which the purpose of those plans has been achieved. It requires data or evidence about or from students (Pellicer & Anderson, 1995). As you'll discover in Chapter 11, there are several assessment alternatives and formats teachers can implement to provide learners opportunities to show what they know and what they can do.

Three Phases of Instructional Planning and Decision Making

Teachers engage in instructional planning and decision making almost continually. They plan prior to instruction, while implementing instruction, and following instruction. These planning times sometimes are referred to as the

preinstructional phase, the interactive phase, and the postinstructional phase. They entail the following (Arends, 1998):

- The **preinstructional planning phase** includes choosing content, choosing an instructional approach, allocating time and space, determining structures, and determining motivation.
- The **interactive planning phase** consists of presenting, questioning, assisting, providing for skills practice, making transitions, and guiding learners.
- The **postinstructional planning phase** involves checking for understanding, providing feedback, assessing and evaluating student performance, and communicating the learning outcomes to students and parents.

Instructional Time

If teachers are to plan effectively, they need to understand some important variables related to time and appreciate their implications for the planning process. For example, although the total amount of time learners typically spend in school is 180 days per year and six or seven hours per day, the amount of time learners actually attend school—called *attended time*—is less than this total time. Illness, snow days, dental appointments, truancy, and power failures reduce students' attendance time from the total time required by law. In addition to total time and attended time, the following types of time also have implications for teachers' instructional planning (Weinstein & Mignano, 1996):

- *Available time* refers to the time during the school day that is available for academic purposes. Attended time—when reduced by lunch, recess, fire drills, extracurricular activities, and other noninstructional events—constitutes available time.
- *Planned academic time* refers to the time set aside for different subjects and activities. For example, a third-grade teacher might schedule a ninety-minute language arts block, sixty minutes for learning centers, and fifteen minutes for free reading.
- *Actual academic time* consists of the time teachers actually spend on academic tasks or activities; it's also known as allocated time or opportunity to learn. A teacher may plan a thirty-minute skills lesson, but due to her students' late return from music she may be left with only twenty-five minutes for instruction.
- *Engaged time,* sometimes referred to as time on task, is the time learners actually spend on academic activities or tasks. Just because teachers are teaching doesn't guarantee that students are listening, participating, and engaging actively in the planned instructional activities.
- *Academic learning time* is the time learners spend engaged in academic tasks at which they're successful. Even when students are on task, that engaged time converts to academic learning time only when students' efforts result

in actual learning. Perhaps you can recall times when, as a learner, you worked very hard but had very little to show for your efforts. For example, you may have spent a great deal of time attempting to prove an algebraic theorem or write a convincing appeal for recycling without ever reaching your intended goal.

Academic learning time is the type of time that is most closely related to student learning and achievement. For that reason, it's the type of time teachers must have in mind as they engage in instructional planning.

An Instructional Aside: The Lesson Plan Book

By now you've no doubt noticed that we make a habit of revisiting previous concepts you've read about and connecting them to other concepts. Our attempts to help you make connections between what you know and what we're asking you to learn is an application of schema theory. Schema theory encourages teachers to build on learners' prior experiences and also reminds educators that the way learners store concepts affects their ability to retrieve those concepts.

For example, when engaged in the process of showing us what they know (while responding to essay questions), preservice teachers have on occasion approached us with their essay exams in hand, pointed a weary finger at a particular question, and demanded to know, "What list do you want here?" Such a question tells us more than we want to know about the way the askers have prepared—or not prepared—for the opportunity to show us what they know! Our experiences suggest that "crammers," in their panic to "learn" material for a test, resort to simply memorizing lists, without understanding the significance of the concepts contained in those lists (and almost certainly without seeing any connections between them). Because you're an aspiring teacher, we'd like very much for you to actually remember and apply what you learn from this book, as well as from the courses you take. Consequently, we'll persevere in our quest to highlight connections between what we hope you know and understand at this point and the new concepts we're inviting you to learn.

In Chapter 1 we asked you to resurrect recollections of your own school experiences. Those prior experiences, besides influencing your general views of the teaching/learning process, also color your ideas of what instructional planning means. Whether as an elementary or secondary student or as a preservice teacher observing in preK–12 classrooms, you likely have at least caught glimpses of "the lesson plan book." Do you remember what it looked like? Was it a collection of boxes with designated places for the teacher to identify the subjects the boxes relate to and/or specific days of the week? What was in those boxes? Page numbers? Activity descriptions? Although those lesson plan books you caught glimpses of may have been artifacts of the instructional planning process, they certainly are not synonymous with instructional planning. As the subtitle of this chapter, "Lesson Plans That Don't Fit in a Box," suggests, there is much more to effective instructional planning than identifying page numbers or math problems for students to complete.

Five Questions to Guide Instructional Planning

In Chapter 2 we introduced you to the notion of professional development plans (PDPs). In addition to encouraging you to use PDPs throughout your professional lives, we suggested five simple questions to use in formulating them. We think so highly of those five questions and their simplicity that we use slightly altered versions of them to guide our instructional planning. When preservice teachers ask us what particular lesson plan format we want them to use, our response is that we don't care what format they use, as long as their lesson plans answer these questions, which we have outlined here.

What Am I Going to Do?

Instructional goals, objectives, performance statements, and other expressions of intended student outcomes all are responses to the question, "What am I going to do?" Whereas Chapter 8, with its focus on developing and designing curricula, focused on goals, here the focus is on objectives. What's the difference between goals and objectives? What's the similarity? What's the connection or the relationship between the two? Which is the larger concept? The following paragraphs address these questions.

■ Goals

Goals are the "big ideas" of education. When educators discuss the purpose of schools, they are talking about the goals of education, such as "To produce contributing members of society" or "To develop each student's full potential." When teachers describe long-term learning outcomes ("I want my students to be lifelong learners" or "I want my students to read for enjoyment"), they are likewise referring to goals. General instructional goals describe intended outcomes for specific disciplines or domains, such as literature appreciation or mathematical proficiency; they identify the desired ultimate student performance. By contrast, when teachers identify more immediate desired learning outcomes and state them in terms of measurable student behaviors, they are formulating objectives.

■ Instructional Objectives

Instructional objectives are statements that describe teachers' intentions for students' growth and change. Like road maps, they help teachers and learners know where they're going and when they've arrived at their destination. And like road maps, some instructional objectives are simple, whereas others are complex.

Teachers clarify their instructional goals by defining specific learning outcomes, or objectives, related to them. These outcomes describe the skills or performance learners exhibit once they've achieved the goals. Consequently, instructional objectives should be relevant to the goals they support and representative of the tasks and performances related to them.

A student performance is any measurable student response that is a result of learning (Gronlund, 1995). Instructional objectives describe particular student performances (for example, composing a business letter that includes a heading, an inside address, a greeting, a body, a closing, and a signature). However, there is a striking lack of consensus regarding exactly what components instructional objectives should include beyond such performances. Different theorists advocate different standards regarding the development of instructional objectives. For example, Mager (1984b) would include conditions and criterion levels (see following discussion) as well as observable learner behaviors, whereas Gronlund (1995) would identify only expected performances.

Instructional goals and objectives provide both direction for instruction and guidelines for assessment. They also communicate the instructional intent and focus to learners, parents, other teachers, and administrators. Instructional objectives assist instructional planning efforts by guiding the selection of methods, materials, and appropriate assessment procedures. Well-written, specific objectives can play a key role in assessment by clearly describing the types of student performance that are anticipated (Gronlund, 1995). In portfolio assessment, instructional objectives guide learners' decisions concerning what to include in their portfolios. Objectives also help teachers determine what items to include on observational instruments, rating scales, checklists, and matrices.

■ Mager's Theory of Instructional Objectives

According to Mager, an "objective is a description of a performance you want learners to be able to exhibit before you consider them competent. An objective describes an intended result of instruction, rather than the process of instruction itself" (1984b, p. 3). For Mager, usefully stated objectives successfully communicate intended instructional results to the readers and include the following three components:

- *Performance, or students' observable behavior.* What are learners expected to be able to do? Some performances are directly observable (overt), whereas others cannot be observed directly (covert). When performance is covert, Mager suggests adding an indicator behavior to the objective. For example, "identify" is a covert performance. Perhaps learners are to identify correct responses by underlining or circling them. Those are the indicator behaviors.
- *Conditions, or testing situation.* Under what conditions should learners be able to perform the intended outcome or result?
- *Criteria for acceptable performance.* How well must learners perform the intended outcome or result? Mager (1984b, p. 96) asserts that for a performance criterion to be useful, it should "(1) [say] something about the quality of performance you desire, (2) [say] something about the quality of the individual performance rather than the group performance, and (3) [say] something about a real, rather than an imaginary, standard."

Mager combined these three components into an instructional objective regarding teachers' understanding and application of objectives: "Given any

objective in a subject area with which you are familiar, in all instances be able to identify (label) correctly the PERFORMANCE, the CONDITIONS, and the CRITERION of acceptable performance when any or all those characteristics are present" (1984b, p. 3).

■ Gronlund's Theory of Instructional Objectives

Mager's critics argue that his format, when used exclusively, leads to overemphasis on the prespecification of learner outcomes, reductionism, and neglect of many of the most important goals of education. They contend that both learners and teachers must see the big picture rather than just isolated specific objectives. Critics also suggest that many of the more complex cognitive processes aren't readily observable, so they might be neglected because they are not easy to measure (Gronlund, 1995; Wiley, 1990–1991). Other theorists favor writing objectives in more general terms and then adding specifics later (Gronlund, 1995).

Gronlund (1995) cautions against developing objectives that are too narrow or too broad and suggests that conditions and standards shouldn't be included in objectives for purposes of regular classroom instruction, although they may be helpful for programmed instruction and mastery testing. Gronlund contends that including conditions and standards results in long, cumbersome lists that restrict teachers' freedom. He recommends that teachers consider conditions and standards at the time student performance is assessed. Gronlund also points out that the standard may change from the beginning of a unit of study to the end. Consequently, he is among those who advocate a two-step process of stating the general instructional objectives and then further defining them with specific learning outcomes.

■ Domains and Objectives

Psychomotor (physical) objectives often are the easiest to write, because learners' performance is easily observed in this area (for example, word processing, handwriting, performing sit-ups). Objectives that feature the lower levels of the cognitive domain (information recall) are also fairly easy to write. In fact, because low-level cognitive objectives typically are the easiest to write, they tend to be overemphasized. However, complex cognitive objectives (such as problem solving) shouldn't be omitted just because they're not directly observable and consequently are difficult to define in terms of specific outcomes.

Most teachers find affective objectives (attitudes, feelings, dispositions) the most difficult to write, because of the vagueness of the terminology, the numerous ways affective outcomes can be classified, the need to account for covert behavior, and the fact that more complex affective outcomes are closely integrated with other behaviors and therefore are difficult to isolate and state in specific terms (Gronlund, 1995). When attempting to write affective objectives in terms of overt behaviors, teachers must be careful not to neglect inner, unobservable feelings. Although teachers should use precise terminology when defining affective objectives, they shouldn't ignore important outcomes because they're difficult to define in precise terms.

■ Objectives and Constructivism

By stating that lesson plans should answer the question "What am I going to do?" we're proposing that you need to have a clear idea of where you're going before you begin. You also need to be able to articulate to students, parents, principals, and other stakeholders in the teaching/learning process where you're going. Why do we think that's so important? After all, some might suggest that identifying a desired student outcome runs counter to the constructivist notion of allowing students to construct or build their own learning in their own ways.

Regarding the juxtaposition of objectives and constructivism, quite simply, we don't see a conflict. Both teachers and students can benefit from moderate doses of guidance and structure in the teaching/learning process. Both can benefit from knowing and understanding where they're headed. In fact, specific, intentional, identified outcomes are often desirable. Just as when playing a game it's helpful for the participants to know and understand the "aim of the game," in structuring learning experiences, it's helpful for the participants to know and understand that there is a point to what they're doing.

Letting students in on such secrets also helps them see the big picture, as they learn to put the different pieces of learning together to create an integrated whole. Perhaps you've noticed that in formal education, particularly at the secondary level, educators do a very good job of dividing the curriculum into subject chunks (for example, twentieth century American literature, world history, chemistry), but they're not nearly so devoted to helping students put those isolated chunks back together in ways that are meaningful to them. Recall from our discussion of integrative curricula that this issue serves as a compelling rationale for theme-based instructional units designed to integrate curricular areas.

One final point with regard to constructivism and objectives: just because teachers identify learning outcomes doesn't mean that they will prescribe how each and every student must arrive at those outcomes. In fact, acknowledging and providing for differences in students' learning styles, prior experiences, and learning needs constitutes yet another reason to clearly communicate intended learning outcomes to students. In effect, teachers are saying to students, "Here's the direction we're headed, and here's where we all need to end up, but there are lots of different ways you can get there." Yes, learning can simultaneously be constructivist and goal-directed.

■ Developing Objectives: A Think-Aloud

Well-written objectives also can make assessing student learning less difficult. Here's where our friendly acronym SAM can be of assistance. When developing and critiquing objectives, we focus on three main attributes: *specificity, attainability,* and *measurability*. Specific objectives identify observable student behaviors and make it possible for teachers to assess whether students have, in fact, met those objectives. They also describe what learners *will* do, as opposed to what they *won't* do ("Listen" as opposed to "Don't talk"). Attainable objectives set students up for success, by identifying learning outcomes that are log-

ical next steps in the learning process. They're also appropriate to the developmental levels of students. Measurable objectives identify criterion levels or acceptable levels of performance. They tell both teachers and students what constitutes a "good" performance.

To find perfect nonexamples of specific, attainable, and measurable objectives, you need look no further than the New Year's resolutions people make and break on an annual basis. Consider these classics: exercise more, study more, spend less money, watch less television.

Besides the fact that they often feature the words *less* and *more,* what do you notice about these resolutions? Comparing them against the SAM standards, how do they fare? Are they specific? Of course not! If they were, somebody might try to hold you to them. Are they attainable? We can't really tell, because they're so vague. Are they measurable? No, because they don't identify acceptable levels of performance. For example, with the resolution "Eat less," if you're accustomed to consuming eight pizzas a day, and you cut back to seven, have you met your objective? Is a reduction of one pizza good enough?

You'll note that many of the resolutions identify what you're *not* going to do, as opposed to what you're going to do, in contrast to effective objectives, which are positively stated. Objectives also focus on and build on learners' strengths. Instead of operating from a deficit model of education (that is, habitually identifying learners' weaknesses), teachers need to identify what learners can do—what they do know—and use those as starting points. Teachers can't add to or build on something that doesn't exist, and neither can learners.

Looking back at the New Year's resolutions, how could you transform them from weak, ambiguous, ill-defined objectives to specific, attainable, measurable objectives? Let's begin with the ever-popular "Exercise more." At least it's positively stated. It also identifies only one task or concept, which is important. Including more than one task or concept per objective can cause confusion when it comes to assessing outcomes. For example, if in one objective you state that students will divide words into syllables and circle syllables that contain long vowel sounds, you're asking for two completely different behaviors that involve two completely different concepts. It's entirely possible that students may be able to divide words into syllables but be unable to identify those syllables that have long vowel sounds. What you actually have are two objectives, so it's best to write them as such.

So you've decided that "Exercise more" is positively stated and identifies only one behavior or concept. Those are two points in its favor, but that's all the points it earns. Obviously it's not specific and it's not measurable, and because it's so vague, you have no way of determining if it's attainable. So how do you improve it? First of all, you decide what you mean by "exercise." Do you mean some form of aerobic or cardiovascular exercise? Sit-ups, maybe? Golfing? What? Since research strongly supports the benefits of aerobic exercise, we'll identify that as the type of exercise.

Now, what about a performance criterion? That is, how will you know you've met your objective? If you simply state that you will engage in aerobic exercise, how will you know you've accomplished your objective? (For example, if you jog around the block once a month, will you have met the objec-

tive?) Making the statement more specific helps define the performance criterion: "Three times a week, for at least thirty minutes each time, I will engage in aerobic exercise." Now, how can you make the term *aerobic exercise* more specific? You can do that by adding conditions, such as "Three times a week, for at least thirty minutes each time, I will engage in aerobic exercise that is compatible with my spaghetti knee." Now you know that the aerobic exercise might include swimming, biking, or walking, but it definitely will not include running, racquetball, or tennis.

You've now developed an objective that meets the SAM criteria—that is, it's specific, it's attainable, and it's measurable. It's specific because it identifies the conditions (compatible with my spaghetti knee) under which the behavior can be performed. It's attainable because the criterion level (three times a week for at least thirty minutes each time) identified is reasonable. It's measurable because the specific behavior (aerobic exercise) identified is observable, and in order to measure something you must first be able to see or hear evidence of it.

■ Selecting Verbs Appropriate for Objectives

If that seemed like a lot of work, it's only because it *is* a lot of work. In our opinion, writing effective objectives is one of the most challenging parts of instructional planning, just as identifying observable behaviors is one of the most challenging parts of writing objectives. In fact, the key to writing specific objectives is verb selection. Although people often think that adjectives are the most descriptive parts of speech, it's verbs that either propel writing forward or drag it into a passive state. So the next time you're writing poetry, concentrate on verbs that agitate, emote, and paint pictures. And the next time you're writing objectives, concentrate on verbs that describe, specify, and lead to documentation of learners' performance.

■ Selecting Verbs Appropriate for Expressing Performance Outcomes

Finally, objectives that clearly specify observable behaviors, criterion levels, and conditions give teachers a huge head start in their attempts to answer the question "How did I get the job done?" This is true because their responses to that question involve identifying procedures for assessing the degree to which students met the stated objective and are therefore directly connected to their responses to the question "What am I going to do?" Figure 7.8 lists verbs that are appropriate for expressing a variety of different performance outcomes. Later in this chapter you'll read more about responding to the question "How did I get the job done?"

Why Am I Going to Do It?

As many of our former students will testify, we repeatedly and emphatically remind all our students to always know why they're doing what they're doing. Then we go on to emphasize the importance of being able to clearly articulate the rationales for one's instructional decisions to students, parents, and administrators. However, the second question of instructional planning—"Why am I going to do it?"— often goes unanswered, even by teachers who dutifully

Figure 7.8 Verbs Appropriate for Various Performance Outcomes

Creative Behavior					
STUDENTS WILL	*generalize*	*rearrange*	*restate*	*simplify*	*reorder*
	rewrite	*rename*	*modify*	*reconstruct*	*retell*
	synthesize	*predict*	*revise*		
Complex Logical/Judgmental					
STUDENTS WILL	*analyze*	*contrast*	*substitute*	*structure*	*discover*
	define	*assess*	*criticize*	*evaluate*	*suggest*
	conclude	*induce*	*combine*	*reduce*	*generate*
	plan	*compare*			
General Discriminative Behavior					
STUDENTS WILL	*choose*	*detect*	*distinguish*	*pick*	*omit*
	separate	*select*	*differentiate*	*identify*	*isolate*
	order	*point*	*describe*	*discriminate*	*indicate*
	list	*match*	*place*		
Mathematical Behavior					
STUDENTS WILL	*add*	*count*	*compute*	*reduce*	*circumscribe*
	check	*calculate*	*tabulate*	*verify*	*solve*
	derive	*subtract*	*divide*		
Lab Science Behavior					
STUDENTS WILL	*estimate*	*infer*	*observe*	*manipulate*	*organize*
	react	*graph*	*calibrate*	*demonstrate*	*operate*
	report	*record*	*extrapolate*	*conduct*	*formulate*
	classify	*weigh*	*measure*	*balance*	*increase*
	itemize	*predict*			

construct SAM objectives that include observable student behaviors, criterion levels, and conditions. Unfortunately, neglecting to respond to the question "Why am I going to do it?" can result in specific, attainable, measurable, but meaningless objectives.

For example, consider this objective: "Following a unit of study on Iowa history, students will write the names of all ninety-nine counties in Iowa, with correct spellings."

What's the observable behavior?—Writing the names of Iowa counties.

What's the criterion level?—All ninety-nine counties correctly spelled.

What's the condition?—Following a unit of study on Iowa history.

What's the point?—We don't know!

Reflecting on possible, defensible rationales, the best we can do is to speculate that knowing the names and spellings of all ninety-nine Iowa counties is

Figure 7.8 Verbs Appropriate for Various Performance Outcomes *(cont.)*

Social Behavior					
STUDENTS WILL	*accept*	*discuss*	*participate*	*volunteer*	*interact*
	allow	*disagree*	*laugh*	*permit*	*contribute*
	answer	*cooperate*	*join*	*praise*	*communicate*
	argue	*compliment*	*invite*	*reply*	
Language Behavior					
STUDENTS WILL	*abbreviate*	*indent*	*punctuate*	*spell*	*translate*
	alphabetize	*outline*	*read*	*state*	*verbalize*
	articulate	*print*	*recite*	*summarize*	*write*
	capitalize	*pronounce*	*speak*	*syllabicate*	
Study Behavior					
STUDENTS WILL	*arrange*	*compile*	*label*	*locate*	*classify*
	itemize	*categorize*	*diagram*	*cite*	*organize*
	underline	*note*	*record*	*search*	
Physical Behavior					
STUDENTS WILL	*march*	*catch*	*hit*	*climb*	*jump*
	knock	*chase*	*swing*	*toss*	*throw*
	skate	*lift*	*pitch*	*swim*	*stretch*
	float				
Arts Behavior					
STUDENTS WILL	*assemble*	*handle*	*color*	*stir*	*saw*
	brush	*heat*	*melt*	*trace*	*polish*
	build	*construct*	*illustrate*	*varnish*	*trim*
	form	*paint*	*carve*		

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part of that canon of what "every culturally literate Iowan should know." However, because we don't buy that as a defensible answer to the question "Why am I going to do it?" we might propose this as an alternative objective: "Following a unit of study on Iowa history, students will identify that Iowa has ninety-nine counties and will state three implications that fact has for the structure and organization of county government in the state of Iowa." With that alteration, rather than just listing isolated facts, students will be encouraged to take one fact (that Iowa has ninety-nine counties) and relate it to the whole picture of Iowa's governmental structure. In other words, the modified objective asks students to place the single fact in a larger context.

So, it's necessary to have a defensible rationale. It's also imperative for teachers to clearly articulate their rationale to students, parents, principals, colleagues, and other constituencies who have the right to demand a reasoned response to the question "Why am I going to do it?" If teachers find they can't clearly articulate their reasons for a particular objective, student activity, or

unit of study, then they need to revisit the simple, but important, question "Why am I doing this?" If honest answers to this question result in responses such as "Because I don't know what else to do," "Because I've always done it this way," or "Because this is what the textbook says to do next," then teachers have abdicated their role as decision makers for that of "assistants to materials" (Durkin, 1989).

Sometimes in their attempts to respond to the question "Why am I going to do it?" teachers say enthusiastically, "Because it's fun!" Even though *fun* is one of our favorite words, in terms of instructional planning, it needs to be paired with the word *functional*. Instructional time is a limited resource. Consequently, teachers need to ensure that the instructional activities they plan serve dual purposes. Whether learners are cooking, dissecting, going on field trips, or creating string art, there must first and foremost be a defensible, instructional purpose behind it. Or as Bruner stated it, "The first object of any act of learning . . . is that it should serve us in the future" (1960, p. 17).

What Do I Need to Do It?

Materials that support instruction take many forms. Technology has added breadth and choice to the array of possibilities available for supporting and enhancing the teaching/learning process. So, what do you need to do it? If your plans call for estimating and then measuring the amount of snow it takes to equal one inch of rainfall, what materials will your students and you need to do this? If you want your students to plan a trip from New York City to Los Angeles, what resources are available to help them succeed at this task? In fact, doesn't this task involve many subtasks?

Who can help you locate and provide the resources your students and you will need? What role can your school's librarian or media specialist play in helping you locate appropriate materials to support your instruction? Can you identify parents or students who possess expertise or resources that will enhance the teaching/learning process? How can you connect with other teachers and students who are involved in similar projects or activities (for example, via the World Wide Web, computer programs, peer tutoring, collaborative or team planning, mentors, resource teachers, or reading buddies)? What related children's literature, both expository and narrative, is available to use for curricular integration?

Taking the time to answer these questions, as well as the question "What do I need to do it?" can account for the difference between haphazard, fly-by-the-seat-of-your-pants teaching and teaching that is characterized by efficiency and organization. Spontaneity is great when used in moderation, but as a rule it is always preferable to have a plan.

How Am I Going to Do It?

The first words that came out of the student teacher's mouth immediately after being observed by her university supervisor were, "I know, I know—I should have given them the pencils *after* I explained the directions!" Yes, sequencing is important in relation to teachers' answers to the question "How am I going to

do it?" Sometimes teachers make the mistake of assuming that their students can read their minds. Other times they forget that, even though they've been doing something or thinking about a concept for many years, for their students it's the very first time. Consequently, it's imperative that teachers have in mind a clearly defined procedure or task analysis before initiating an activity.

■ Procedures, Sequencing, and Task Analysis

After a few attempts at planning instruction, you'll likely conclude that different types of instructional activities and different subject areas require you to think about instructional procedures in different ways. Whereas learning certain types of content generally does not require one particular sequence of instruction, learning other types (especially procedural knowledge) generally does require an identifiable sequence of instruction. For example, it's fairly inconsequential whether students learn states and capitals in fourth grade or fifth grade. However, there is a preferred sequence in teaching certain mathematical skills and concepts, such as understanding addition before turning to multiplication.

Speaking of skills, try taking a simple skill or task and analyzing it. Tying shoes is simple, right? In ten steps or less, identify the procedures for tying shoes. First of all, what's the operational starting point? Does the task begin with finding your shoes? Does the task begin with putting your shoes on the right feet? Does the task begin with lacing your shoes? Or is it simpler to avoid the issue and buy shoes with Velcro fasteners? For the sake of discussion, let's say you begin with your left shoe on your left foot and your right shoe on your right foot—laces intact. Now that you've identified the operational starting point, what do you do? Do you make an X and then make one bunny ear? Or do you cross one lace over the other lace and make two bunny ears? What if you're left-handed? What if you're a visual learner instead of an auditory or kinesthetic learner? Does that change the sequence at all? Obviously, it's easier to wear sandals or go barefoot rather than complete a task analysis for tying your shoes, but approaching life that way isn't going to get you through the big interview!

Hopefully you're getting the idea that analyzing learning tasks and planning instructional sequences require careful thought and preparation. As we emphasized earlier in this book, alternatives or contingency plans are an essential component of instructional planning. Teachers need to constantly ask "What if?" Engaging in if-then thinking enables them to anticipate potential problems and provide plausible alternatives. Failing to prepare Plan B, Plan C, and Plan D for that inevitable time when Plan A doesn't work results in teachers' resorting to the "louder and slower" approach. Just because students don't "get it" doesn't mean they've failed. Perhaps, instead, when students don't "get it," teachers have failed to accommodate the many learning styles represented in their classroom.

We're not saying that teachers need to script every line they are going to utter throughout the day. In fact, for the most part we find that procedures written in paragraph format are difficult to follow. However, we are saying that careful preparation can lead to increases in teachers' self-confidence and clar-

ity of thought, and this in turn can lead to students acquiring the concepts and skills articulated in instructional objectives.

■ Planning for Closure

Time constraints may cause teachers to neglect an essential instructional task—summarizing the lesson. This step, known as providing closure, provides teachers with an opportunity to connect current learning to past learning and to prepare students for future learning (Pellicer & Anderson, 1995). Due to the importance of creating connections between what students know and what they're being asked to learn, when some part of instruction must be omitted due to time constraints or other reasons, teachers should omit content or practice but never delete closure.

How Will I Know I've Done It?

As stated earlier, objectives that specify observable student behaviors, criterion levels, and conditions make it easier for teachers to formulate appropriate responses to the question "How will I know I've done it?" Teachers who succeed at designing and implementing effective learning opportunities understand the important link between specific objectives and assessment procedures. Consequently, they create assessment opportunities that emerge from clearly stated objectives.

■ Specific Objectives and Assessment

For example, for the objective "Using a Venn diagram, students will identify five similarities and five differences between their own housing needs and the housing needs of Australian Aborigines," assessment of student outcomes would simply involve determining whether students had included five similarities and five differences on their diagrams. If their diagrams meet these criteria, then students have met the stated objective, and you as a teacher have succeeded at "getting the job done." If some students identify only one similarity or difference, then they have only partially met the objective, and you as a teacher have had only limited success "getting the job done." Consequently, many times assessment is a matter of ascertaining to what degree students have met stated objectives.

■ Assessment Criteria

Clearly defining performance objectives makes assessment procedures more obvious, clearer, and easier to develop. Teachers can convert lists of specific learning outcomes to checklists or rating scales. When objectives focus on a product, teachers can identify the predetermined characteristics that define a satisfactory product. For example, if the task is to write a business letter, a teacher might specify the following performance criteria:

- Letter contains standard business letter elements, including heading, inside address, greeting, body, closing, and signature.

- Letter follows standard business letter format, including alignment of all elements on left margin, colon following greeting, and appropriate spacing and margins.
- The student expresses ideas clearly; writes well-structured, relevant paragraphs; employs standard English usage and spelling; and uses correct punctuation and capitalization.

■ Matching Assessment Procedures to Objectives

Certainly there are many ways to assess student learning, but teachers need to search for the most appropriate matches between assessment strategies and the stated instructional objectives. For example, if the instructional objectives describe originality and creativity as desired outcomes for students' writing, then the assessment strategies teachers use must complement those objectives. That may sound obvious, but what sometimes happens is that teachers assess what is easy to assess (such as spelling, handwriting, and subject-verb agreement) rather than variables that are "fuzzier" (such as character development, plot structures, compelling descriptions). Assessment, like listening, is something all teachers do but few do well. In Chapter 11 we focus on assessment and evaluation as processes critical to informing instructional decision making.

Self-Assessment and Reflection

A second important facet of responding to the question "How will I know I've done it?" involves self-assessment and reflection on the teacher's part. Here, appropriate follow-up questions include "What went well? What do I need to do differently next time? What, if anything, do I need to reteach?" and "What, if anything, do I hope never to do again?" Other questions teachers can use to guide their assessments of their instructional plans include the following (Pellicer & Anderson, 1995, p. 84):

1. Is the purpose or goal of the lesson or unit made clear?
2. Are the activities likely to engage students in the process of learning? (That is, are they likely to be excited about the activities or bored to tears by them?)
3. Are the activities likely to lead students to attain the lesson or unit purpose or goals?
4. Are the needed materials and other instructional resources (such as computer software and videotapes) available and accessible?
5. Is an amount of time to be devoted to the lesson or unit specified? If so, does it seem reasonable?
6. Does the plan specify a way to gauge and/or monitor purpose/goal attainment?
7. Does the plan include provisions for providing students who are initially not attaining the purpose or goal opportunities to do so? If so, do these provisions seem reasonable?

Self-assessment and reflection are activities in which students can engage as well. If teachers wish students to assume responsibility for their own learning, then teachers need to build in opportunities for students to learn to evaluate their own work and identify logical next steps in their individual learning processes.

Yeah, but Real Teachers Don't Plan That Way!

Because we teach preservice teachers, we know you're probably developing your list of "yeah-buts." Chief among those "yeah-buts" is the often-heard lamentation of the novice teacher, "Yeah, but real teachers don't plan that way!" We offer as a more accurate statement, "Yeah, but *experienced* teachers don't plan that way!" Here again, we refer to what we know about schema theory to explain the differences that exist between the way novice teachers plan and the way experienced teachers plan. If you've never helped third graders develop Venn diagrams, then you have no prior experience from which to draw in providing that particular support to those particular learners. Consequently, we would advocate that you rely on a higher degree of structure and planning for that process than would a veteran teacher who has successfully helped fifteen years' worth of third graders create Venn diagrams.

Different Approaches to the Instructional Planning Process

If you fail to find this reasoning concerning instructional planning compelling, then we refer you to research that indicates that experienced teachers use a cyclical or nonlinear approach to planning, whereas novice teachers utilize a linear approach (Arends, 1998; Glatthorn, 1993).

The Rational-Linear Instructional Planning Model

The **rational-linear instructional planning model** is the dominant perspective on instructional planning. It emphasizes defining goals and objectives as the first step in a sequential planning process. Once teachers have identified instructional goals and formulated specific objectives relating to those goals, they then plan actions (instructional activities) to satisfy those objectives. Lastly, they specify the learning outcomes that will result from the actions they've planned. Consequently, the rational-linear instructional planning model can be represented as follows:

Goals → Actions → Outcomes

The Nonlinear Instructional Planning Model

Teachers who use the **nonlinear instructional planning model** begin the planning process by developing instructional activities. Then they connect those activities to the outcomes they will produce. Finally, they identify the goals to which the outcomes relate. The nonlinear approach has been described as the "ready-fire-aim" approach, in contrast to the more traditional

(linear) "ready-aim-fire" approach (Fullan, 1991). Consequently, the nonlinear instructional planning model can be represented as follows:

Actions → Outcomes → Goals

Comparing Novice Teachers' and Experienced Teachers' Planning

Experienced teachers, in their planning processes, tend to focus on content and specific instructional activities rather than on objectives. Novice teachers often find it difficult to learn planning skills from experienced teachers, because of the following reasons: experienced teachers think differently about planning than novice teachers do, much of the planning process is not directly observable, experienced teachers can't accurately describe their thinking and instructional decision making in ways that novice teachers can understand, and experienced teachers approach planning and instructional decision making from a vantage point informed by years of prior experience.

Preservice Teachers' Reflections on Instructional Planning

We asked two preservice teachers to reflect on the process of planning integrative units. Both created units for intermediate-level students. However, Emily collaborated with another preservice teacher to develop an integrative unit early in her preservice preparation, whereas Tina developed and taught her unit as part of her novice teaching experience. The particular lessons they focused their reflections on (see the New Teachers Talk feature that begins on page 380) both contain a preassessment component. However, Emily's lesson features preassessment of learners' content knowledge, whereas Tina's lesson features preassessment of learners' skill levels. Figure 7.9 profiles Emily's lesson plan, and Figure 7.10 profiles Tina's lesson plan.

Teacher Planning Recommendations

By way of summarizing our discussion of instructional planning and the processes it entails, we share the following recommendations:

1. *All teachers should plan.* Unless teachers can visualize instructional possibilities, they're unlikely to achieve meaningful goals. Also, instructional planning transforms curricula into instruction. This notion is particularly important when curricula are new—or new to the teachers who must implement them. In the process of planning, teachers learn the subject matter better themselves; prepare or acquire necessary instructional materials; and make decisions regarding the content, pace, sequence, clarity, and completeness of the curricular materials they are expected to use (Pellicer & Anderson, 1995).

   Yes, planning takes time. When teachers feel that they're too busy to plan and that they're paid only to teach, they typically spend most of their

Figure 7.9
Emily's Lesson Plan

A Walk Through the Rain Forest

Objectives

1. After researching one feature of rain forests, student pairs will synthesize the results of their research in a format that includes both print and visuals and that allows them to share their findings with other class members.
2. After completing their research projects, student pairs will share their findings with their classmates in a five-minute presentation that convincingly explains to their audience why the feature they profiled is an important component of rain forests.

Rationale

This lesson provides an opportunity for students to learn in-depth about particular rain forest species and resources and the importance of those species and resources. The lesson also creates the need for students to learn and apply research skills.

Materials

- KWL Chart (Form #1)
- Book: *A Walk Through the Rainforest;* other books and reference materials related to the rain forest
- Paper
- Supplies for creating visuals (markers, poster board, computer hardware and software, digital camera, video camera and recorder)

Procedures

We will begin the lesson with a KWL chart, which will be used throughout the duration of the unit. Ask the students what they *know* about rain forests and what they *want* to know about rain forests. The last column will be saved for what students *learned* from the unit study [see Form #1 on page 376]. At the beginning of each class period, the teacher will conduct a review of what has been learned so far, using questions to elicit this information from the students. At the end of each class, we will summarize what we learned that day.

Day 1

1:00–1:15: Begin KWL chart. Using their own individual KWL charts, students list what they already *know* about rain forests and what they *want* to know about rain forests. On large group KWL chart, teacher summarizes what the class as a whole already *knows* about rain forests and what they *want* to know about rain forests.

1:15–1:40: Invite students to the carpet area, where they sit in a semicircle on the floor. Introduce the book *A Walk Through the Rainforest.* Ask the students to make predictions about the book's contents. Record their predictions on chart paper for future reference. Then provide students with a purpose for listening: "Listen carefully as I read the book to see how many of our predictions are accurate." The teacher then reads the book aloud, pausing to emphasize main points and invite students' reflections and responses. After reading the book, the teacher asks students to review their predictions and compare them against the book's actual contents.

Figure 7.9
Emily's Lesson Plan *(cont.)*

1:40–2:00: Teacher distributes handouts, which describe the rain forest research activity [see Form #2 on page 376]. Together the class discusses the activity and clarifies the expectations, both regarding the process and the product. After student pairs are determined by random assignment, the pairs brainstorm possible research topics. They consult the resource materials provided as needed. After brainstorming possibilities, student pairs then narrow their possibilities to three or four research topics.

Day 2

1:00–1:10: The teacher leads a discussion regarding what students learned from the book they read together the day before (*A Walk Through the Rainforest*). This information is added to the *learned* column of their KWL charts.

1:10–1:20: Student pairs share with the class their short lists of possible research topics. With the teacher's guidance, the class as a whole collaboratively determines which topic each student pair will research. The main criterion that guides this selection process is diversity of choices.

1:20–1:50: After reviewing the project and process expectations and clarifying any questions, students go to the library to research their topics, using microfiche, consulting journals, checking out reference materials, and so on.

1:50–2:00: After students return to the room, they again add new information to the *learned* column of their KWL charts.

Day 3

1:00–1:15: Begin by conducting a review of what students have learned so far about rain forests. Ask students to share brief updates of their research progress and to identify next steps.

1:15–1:50: Student pairs continue their research, using reference materials and the Internet. The teacher floats from pair to pair to check progress and answer questions.

1:50–2:00: Review what students learned through their research and add main points to KWL charts.

Day 4 and Day 5

Similar to Day 3. By Day 5, all student pairs should be finished with their research and should be working on the format of their presentations.

Day 6

Final in-class opportunity to work on rain forest presentations. Outline with students expectations for their research presentations.

Day 7 and Day 8

Student pairs share research findings.

Day 9

Final review of research findings. Students make final additions to KWL charts, which the teacher collects.

Figure 7.9
Emily's Lesson Plan *(cont.)*

Assessment and Evaluation
Assessment will be based on the lesson's objectives. The KWL charts will serve as a primary assessment tool. The charts will be used for preassessment, formative assessment, and summative assessment. The teacher and students will compare what the students already knew and wanted to know to what they actually learned. The research presentations also will be evaluated. They should focus on the selected rain forest features, clearly describe and illustrate those features, and explain the contributions those features make to the rain forest.

Revision
The teacher will make anecdotal notes about students' progress, in order to modify instructional plans appropriately and revise the time line if necessary. In addition, at the end of each day, journal writing will relate to rain forest topics. The students' writing also may provide information regarding what instructional modifications need to be made.

FORM #1
RAIN FOREST KWL CHART

WHAT I **KNOW**	WHAT I **WANT** TO KNOW	WHAT I **LEARNED**

FORM #2
PROJECT RAIN FOREST

After brainstorming possible rain forest topics, your partner and you will offer three or four possible topics to the class for their input. Collaboratively, one rain forest topic for every student pair will be selected. Working together, your partner and you will research your rain forest feature and develop an appropriate format in which to present your research findings. Your presentation should meet the following criteria:

1. Clearly identify, describe, and illustrate your rain forest feature.
2. Identify the layer of the rain forest where your feature can be found.
3. Persuasively explain why your feature is an important part of the rain forest. What contribution does it make?
4. Explain why you included this feature on your short list of rain forest features you wanted to know more about.
5. Combine print and visuals to create a five-minute presentation of your research findings.
6. Use a variety of sources in your research and at least five different sources.

Figure 7.10
Tina's Lesson Plan

Preassessment: Ability to Work Successfully in Small Groups

Objective
Working in groups of five or six, students will construct ID badges following a specific set of directions.

Rationale
This lesson will give me the opportunity to identify any potential difficulties students may have when working together in groups and/or following a specific set of instructions.

Materials
Yarn
Index cards
Markers
Overhead transparencies: "Rules for Working in Groups," "Group Roles"
Envelopes
Paper
Pencil
Sample ID badge
Directions for making name badge

Procedures
1. Explain that the class will be participating in a cooperative group project.
2. Review and discuss expectations for working in groups.
3. Present the overhead transparency "Rules for Working in Groups."
4. Have a student volunteer read each rule.
5. Ask for student volunteers to role play following the rules and breaking the rules.
6. Check for students' understanding of the rules.
7. Work with students to agree on a method of getting their attention while they're working in groups (for example, turning off the lights, catchword or catchphrase, hand in the air).
8. Explain to the students that they will be working in their groups to create a travel brochure or folder that should convince people to visit the location featured.
9. Explain that, to complete the project, the students also will be going to the library to do research. Library expectations will be discussed later (Wednesday).
10. Tell the students that the actual project will begin on Wednesday.
11. Students' first task as a group will be to make ID badges.
12. Show the students a sample ID badge.
13. Discuss group roles and responsibilities, using the overhead transparency entitled "Group Roles."

Figure 7.10
Tina's Lesson Plan *(cont.)*

14. Explain that each student has been assigned to a group, and group coordinators already have been chosen.
15. Designate areas of the room for each group.
16. Once students are in their groups, they have five minutes to decide who will be in what role.
17. When the groups have designated their roles, group coordinators should raise their hands.
18. Group coordinators will get from the teacher the directions for making ID badges.
19. Emphasize that group coordinators should read all of the directions before beginning the project.
20. Once all groups have finished making their ID badges, ask students for feedback. How did they like working together? What could they do better?
21. Explain that the students will be looking at travel brochures on Wednesday to get ideas on how they might want to design their own travel brochures.
22. Explain that the students will have the choice of designing a travel brochure that features a foreign country or a state.

Assessment
Assessment will consist of teacher observation and a checklist. The directions given to the students for making the ID badges can serve as the basis for the checklist. Through observation, the teacher can determine whether the students had specific problems working in their groups. The presentation portion of the lesson should indicate whether the groups completed the lesson successfully as well.

DIRECTIONS FOR MAKING ID BADGES
The coordinator should read ALL of the directions before beginning the project.

1. Materials Handler/Timekeeper
This person should go to the table and get enough index cards and yarn for each person in the group. One envelope is needed, as well as one marker for the group to use. This person also should make sure that the ID badges are finished in ten minutes.

2. Recorder
The recorder should write the group members' names and roles on the index cards. The group name should be written on the front of the envelope and on the back of each card. Use a marker for all of the writing.

3. Illustrator
The illustrator should make a symbol to represent the group and should draw the symbol on each index card.

4. Coordinator
It's up to the coordinator to make sure that everyone does his or her job and contributes to the project. Without being too bossy, the coordinator keeps the group on task. It's also the coordinator's job to let the teacher know when his/her group has finished its ID badges.

Figure 7.10 Tina's Lesson Plan *(cont.)*

5. Presenter
Once all the groups have finished, the presenter will stand and tell the class the name of the group, the names of the group members, and their corresponding roles.

Note: It is the whole group's responsibility to come up with a group name. Remember that everyone's opinion counts! If you don't understand something, try to work it out as a group FIRST; then ask the teacher. Each member can attach the yarn to his/her own ID badge.

Once all of the presentations have been made, the materials handler should collect all of his/her group members' ID badges and place them in the envelope. Then the envelope should be given to the teacher.

time teaching. Instructional planning happens either "in-flight" or during out-of-school time. Teachers should make a concerted effort to engage in instructional planning before the school year begins and during the first few weeks of school. Such planning has long-term effects and establishes a framework of procedures, routines, expectations, and schedules.

Sometimes teachers use constructivism as an excuse not to plan. However, all kinds of effective teaching require careful attention to planning. In fact, effective teaching, effective planning, and effective organization are all strongly related variables in teaching. Teachers who employ "fluid constructivist" planning engage in a plan-act-observe-evaluate cycle of instruction, which helps them make decisions (Henderson, 1996).

2. *Teachers need to use instructional plans as guides rather than scripts.* Even the most well thought out instructional plans sometimes cannot be enacted as envisioned. Interruptions, unavailability of materials, equipment breakdowns, and interruptions all can contribute to aborted plans. Overly scripted teachers often find it difficult to deal with unanticipated problems, whereas flexible teachers can adapt to the ever-changing demands of instruction (Pellicer & Anderson, 1995). The degree to which teachers are able to anticipate and adapt to unexpected wrinkles ranges from planned flexibility to flexible planning. However, the fact that plans often must be modified is not an excuse for not planning.
3. *Teachers must know when and how to modify their instructional plans.* Random adaptation serves no useful purpose. Effective teachers "read" their students and respond appropriately. Through observation, adept use of questions, and attention to students' nonverbal signals, teachers can discern who's "getting it" and who's not, identify misinformation students have picked up, and determine when they've totally overshot or undershot their students. This is where the art and science of teaching meet (Pellicer & Anderson, 1995).

It's essential for teachers to plan and prepare for adaptation. It's also imperative for teachers to provide learners with a variety of ways to show what

they know and what they can do. Consequently, assessment and evaluation serve as the focus of Chapter 8.

Summarizing What You've Learned

- There are three types of instructional units—resource units, content-oriented units, and conceptually oriented units. Global units feature topics that are open-ended enough to be developed across a variety of grade levels.

Reflecting on a lesson plan that you developed as a part of an instructional unit in your preservice teacher preparation, share your responses to the following questions regarding the instructional planning process.

What contribution did this particular lesson make to the goals of the unit you created?

This particular lesson plan contributed to the goals of the unit by helping the students become familiar with different features of the rain forest. I feel this is of prime importance, because learning about the features of the rain forest is an essential element in comprehending why the rain forest is an important part of our ecosystem. Students need to be able to make connections, and if they haven't had the opportunity to learn about what's in the rain forest, then they won't be able to make the connection of why the rain forest is essential for human existence.

What was the most difficult aspect of planning the lesson?

As with any lesson, the most difficult part of planning this lesson was trying to think about how the lesson would be implemented in an actual classroom. On paper, the lesson may look great and may seem beneficial for the goals of the unit. However, in the classroom, it can be completely ineffective. It's not always possible to predict students' responses. Therefore, the teacher must be flexible, accommodating, knowledgeable, and creative.

What was the least difficult part of creating this lesson plan?

The easiest part of planning the lesson was the introduction. As we designed the lesson, an important goal of ours was to incorporate the KWL chart at the beginning of the unit. We felt this would give us a "steppingstone" for the rest of the unit. Using a KWL chart as a preassessment tool is beneficial, because it's a strategy that provides the opportunity for students to individually express what they know about the rain forest in a stress-free environment. There are no right or wrong answers when the KWL strategy is used as a preassessment tool. Rather, the chart simply indicates where the students stand and where they want to go. Furthermore, the chart can spark new teaching ideas. A teacher cannot know everything, and a KWL chart can lead a teacher in the right direction to capture and maintain learner interest.

What are the strengths of the lesson?

I think the strongest aspect of this lesson plan is that it provides all learners the opportunity to excel in some area. The lesson plan includes a wide variety of skills for students to demonstrate their knowledge of and apply. These include research skills, artistic skills, writing skills, public speaking skills, interpersonal skills, computer skills, and listening skills. Students can learn and excel in dif-

- The key difference between a unit and an integrative unit is curricular integration. An integrative unit must be contextualized in a real-life framework and must promote active learning, as students acquire the knowledge, performances (skills), and dispositions intended. An integrated curriculum incorporates connections between developmental domains and content areas.
- An integrative unit should include an overview, a rationale, goals and major concepts, daily lesson plans, a learning environment design, an overall schedule, a daily classroom schedule, family involvement plans, and resources.

ferent ways, and by including a wide variety of skills in the lesson, the students will have several opportunities to increase their learning.

Another strength of the lesson is that it incorporates large-group, small-group, and independent learning. A teacher must incorporate a wide variety of teaching strategies in order to reach as many students as possible. Some students like to work with little teacher guidance; some like to work with their peers; some like to work with complete teacher direction.

A third strength is that the end of the lesson makes a direct connection to the beginning of the lesson. At the bottom of the Project Rain Forest handout, we indicated that students will collaborate to create their own Walk Through the Rain Forest book. I think this culminating activity will encourage the students to learn, because they can see a goal, a purpose for the goal, and a connection to the goal at the end.

Given what you now know that you didn't know when you first developed this lesson plan, how would you revise it?

After completing my student teaching, I now look back at this lesson plan and realize there are several aspects I would change. First, I think I would put more thought into how this lesson contributes to my goals for the unit and my goals as a teacher. Did I put too much focus on this one project, instead of broadening the learning process? I now think the project may be too time-consuming, a factor that easily could result in lack of sustained student interest and diminished learning outcomes.

Furthermore, I think the questions I included in the Project Rain Forest handout would limit the students. Instead of specifically laying out questions, I should have made simple suggestions. My goal was to encourage creativity, and I honestly feel the questions may stifle creativity.

Third, in a real-life application, I would not give an assignment at the introduction of a unit. An early assignment such as research might discourage student enthusiasm, interest, and participation. I think a more intriguing and real-world application would have been more appropriate for an introduction to the unit. Plus, if this is the first day I am introducing the rain forest to the students, how would they know what animals and plants live in the rain forest? How would they know what to brainstorm if the rain forest is a foreign concept to them?

Fourth, I think the time schedule may be too rigid. Teaching isn't about following an exact schedule; it's not an exact science. I know there are time constraints in teaching, but planning can't be based solely on time. That isn't beneficial for the students or for the teacher.

Fifth, do I want to carry this lesson out over several days? What if the lesson bombs on the first day? I think if I'm going to plan a lesson out over several days, I definitely should be convinced it's exciting and interesting. More important, I

need to consider if the students have a large enough knowledge base to complete the project.

Finally, I would change the evaluation process. I failed to include strategies to assess the students' abilities to work in small groups and their ability to work independently with little teacher guidance. The evaluation process also neglects student participation. These all are important factors that need to be included. I'm sure as I continue to learn and develop professionally, I'll make even more changes in the evaluation process. However, these are the changes I recognize at this point in time.

—EMILY, Preservice Teacher

Authors' Analysis

Emily's reflections regarding her first attempt to develop an integrative unit remind us of conversations we've had with other preservice teachers. They might stop us in the hall a few semesters after they completed their first units to assure us that their instructional planning has greatly improved. Or we might catch up with them in our role as university supervisors of their student teaching or internship experiences. At that point they confess that they reviewed their first attempts at constructing integrative units and were dismayed by their "poor quality." Those conversations serve as teachable moments that allow us to discuss the value of encouraging *approximations* of desired behavior, rather than rigid requirements, and emphasize that different evaluation criteria are appropriate for different levels of development—whether learners are seven, fifteen, twenty-two, or forty.

The passage of time, coupled with Emily's increasing knowledge base, allowed her to see some unintended limitations and unnecessary restrictions in the lesson plan that she and her collaborator had developed two years earlier. However, Emily also succeeded at identifying strengths in her first instructional planning attempt.

What contribution did this particular lesson make to the goals of the unit you created?

This lesson was the first lesson in a unit that featured researching and designing travel brochures or folders. Although it's not flashy or ultra creative, it served an important purpose. I implemented this unit while novice teaching with three classes of fifth graders. Two of the classes had over thirty students, and the third class had twenty-four students. The unit provided an opportunity for the students to use many of the skills they'd acquired in social studies, language arts, art, and mathematics.

Students were to work in small groups to create travel brochures or folders that would convince people to visit their particular country or state. For most of the students, this was their first experience working in groups of more than two or three, as well as the first time many of them used the library for obtaining information about a specific topic.

My cooperating teacher cautioned me about letting these classes work in groups. It was the beginning of the year, and the classes weren't exactly "whipped into shape" yet with regard to following expectations for engaging in socially appropriate classroom behavior. But, being brave (or extremely naive), I chose to go ahead and teach the unit the way I had planned to teach it. However, I used this lesson as a preassessment tool to determine how the students would work together. Their task was relatively simple, and if they could handle this, I was fairly confident that they would be able to handle working together to research and design travel brochures or folders.

What was the most difficult aspect of planning the lesson?

I found that there were two things that were difficult in planning the lesson. First, I had to make sure that I had a job for each group member. The job had to be meaningful and keep the students actively engaged throughout the activity. Second, I was worried about time. I didn't want to go over my time limit, because the students switched classrooms each period, and I had one day to teach and complete the lesson. I also didn't want the students to complete the task in fifteen minutes.

What was the least difficult part of creating this lesson plan?

Because I had a clear and concise objective in mind, the actual writing of the lesson plan was

the least difficult aspect. I knew exactly what I wanted to get out of the lesson (an idea of how the students would work in groups and follow directions). Having a specific format for writing the lesson plan was important. It was extremely easy to follow, because I was very specific and orderly when I wrote out the lesson.

What are the strengths of the lesson?

One of the strengths of the lesson is that it's simple and easy to follow. I believe that lessons don't have to be the huge, extravagant presentations that some preservice teachers may think they have to be. My lesson, though simple, was an extremely important part of the unit as a whole. It prompted any changes that I made in the rest of the unit, because I was able to see if certain students had problems working with others, staying on task, fulfilling assigned job roles, et cetera. I also liked this lesson, because it gave students opportunities to work together and make choices.

Given what you know now that you didn't know when you first developed this lesson plan, how would you revise it?

There are a few things I would change to make this lesson more effective. Due to the large class sizes and time constraints, I should have had the desks prearranged into groups of five or six. I soon realized it takes 35 fifth graders quite a while to rearrange their desks. I should have placed name tags on the desks so students knew what groups they were in.

I also would rethink the decisions I allowed the students to make. For example, as a class, I wanted to determine a system that would allow me to get the students' attention quickly and easily. My efforts to be democratic turned into a fiasco. I had decided to take suggestions from the class and then vote on them. Well, I had a few comedians who came up with inappropriate suggestions that got the entire class "worked up." I realized I should have had something in mind to use as a signal. If I were their full-time teacher, I think things would have worked out differently.

Finally, I would have shortened the lesson for the larger classes and lengthened the lesson for the smaller class. I didn't realize how long it would take a large group of fifth graders to make ID badges. Although I could have taken two days to complete the lesson for the two larger classes, the smaller class completed their ID badges in twenty minutes! I learned that time is an essential part of planning lessons, because it really flies when you're in front of a classroom.

I have to say that this lesson was fun for the students. I could tell they enjoyed the opportunity to work together and do something other than fill out worksheets or listen to a teacher lecture. Although things got chaotic at times, it was well worth the effort to get the students to interact with each other. I believe that, with practice, students can learn to work together in an effective manner.

—TINA, Preservice Teacher

Authors' Analysis

Tina's honest and realistic appraisal of her lesson plan indicates that she possesses and effectively applies self-assessment and reflection skills. We concur that her lesson plan serves a specific purpose that relates directly to her unit as a whole. Given her cooperating teacher's words of caution regarding her students' lack of prior experience working collaboratively in small groups, Tina chose to acknowledge that advice by designing a lesson intended to assess students' abilities in this area. What are some tasks other than making ID badges that Tina could have used to assess students' ability to work in small groups?

Now It's Your Turn

Perhaps you noticed that Emily wrote her lesson plan procedures in a narrative format, whereas Tina used a numbered list to organize her procedures. Which format did you find easier to follow?

In your teaching journal, identify the advantages and disadvantages of each format—narrative and list. Then explain which format you think you'll use more often as you develop your own lesson plans. Explain the reasoning behind your preference.

- Many constructs for integrating curricula have been explored in previous chapters. Student inquiry, active inquiry, schema theory, and whole-language approaches all support curricular integration. In addition to supporting these approaches, curriculum integration needs to be a major emphasis in your future classroom, because students need opportunities to develop their multiple intelligences, to interact socially, and to be able to apply their academic skills to the real world in which they live. Many special needs learners function most effectively in regular classrooms that feature an integrated curriculum.
- There are a variety of structures that promote curricular integration. The Project Approach involves an in-depth investigation of a topic.
- The Reggio Emilia Approach incorporates the Project Approach. Children learn cooperatively as they engage in long-term projects.
- Literature-based instruction involves using a variety of children's literature in the teaching of language arts and other related content areas. In a literature-based classroom, students learn to read, write, talk, listen, and think through being exposed to whole pieces of written language, such as stories, poems, and signs, rather than isolated fragments, such as letters and sounds.
- Curriculum webbing involves a four-step process: identifying a topic and related subtopics, "topicstorming," identifying desired learning outcomes, and preparing for teaching. It's important to include students in the webbing process. Webbing will help you and your students gain insights into the many connections and relationships that emerge from a topic.
- Learning centers are areas in the classroom that have been designed to promote activities related to specific curricular areas or subjects. Learning centers should be incorporated into your classroom design and feature hands-on activities related to particular integrative units.
- Teaming with other teachers is one of the most productive ways to develop integrative units. Schools can support collaboration by providing opportunities for you to meet with colleagues to discuss curricula. Meet at least one hour per week with other teachers, including special area and resource teachers, to discuss curriculum integration and assessment programs and to share resources.
- Long-range or yearly planning identifies the general curriculum content and its sequence, which generally are framed by district curriculum objectives. Mid-range planning includes term and unit planning. Short-range planning consists of weekly and daily lesson planning.
- Instructional planning provides a sense of direction for both teachers and learners and makes students aware of the goals behind the learning tasks they're performing.
- Teachers engage in instructional planning and decision making almost continually. They plan prior to instruction, while implementing instruction, and following instruction. These planning times sometimes are referred to as the preinstructional phase, the interactive phase, and the postinstructional phase.

- Lesson plans need to answer the following questions: What am I going to do? Why am I going to do it? What do I need to do it? How am I going to do it? How will I know I've done it?
- Research indicates that experienced teachers use a cyclical, or nonlinear, approach to planning, whereas novice teachers use a linear approach (Arends, 1998; Glatthorn, 1993). The nonlinear approach has been described as the "ready-fire-aim" approach, in contrast to the more traditional (linear) "ready-aim-fire" approach (Fullan, 1991).
- All teachers should plan. Teachers need to use instructional plans as guides rather than scripts. Teachers must know when and how to modify their instructional plans.

YOUR PROFESSIONAL TEACHING PORTFOLIO

- The topic of this chapter presents many opportunities for you to show what you know and document your progress. As you develop the components of your first integrative unit, be sure to save them for your Professional Teaching Portfolio. You may want to use your initial efforts as artifacts or showcase these products in your "Best Works" collection. Items you should definitely save include curriculum webs, lesson plans, learning environment designs, overall schedules, daily classroom schedules, family involvement plans, and resource lists.

Key Terms

Content-oriented unit
Conceptually oriented unit

Core book
Curriculum webs
Goals (p. 360)
Instructional objectives
Integrated curriculum
Integrative unit
Interactive planning phase
Interdisciplinary instruction

Learning center
Literature-based instruction

Long-range planning
Mid-range planning
Nonlinear instructional planning model
Preinstructional planning phase
Postinstructional planning phase

Project
Project Approach
Rational-linear instructional planning model
Reggio Emilia Approach
Resource unit
Short-range planning
Unit
Whole language

Relevant Resources for Professionals

Books and Articles

- Daniels, H., & Bizar, M. (1998). *Methods that matter: Six structures for best practice classrooms.* York, ME: Stenhouse.
- Katz, L., & Chard, S. (1997). *Engaging children's minds: The Project Approach.* Norwood, NJ: Ablex.
- Roberts, P., & Kellough, R. (1996). *A guide for developing an interdisciplinary thematic unit.* Englewood Cliffs, NJ: Prentice-Hall.

Professional Journals in Education

- *ALAN Review*

  http://scholar.kib.vt.edu/ejournals/ALAN/alan-review.html

  Regularly updated electronic version of the quarterly journal of the Assembly on Literature for Adolescents, with full texts of scholarly articles and back issues.

Professional Organizations

- Council for Pre-Service Technology.
  The Council for Pre-Service Technology (CPT) is a professional organization with both institutional and individual members. The purpose of the CPT is to promote the use of instructional technology in the education of preservice teachers through sharing information, study, experimentation, and demonstration and to provide leadership in preservice technology education. Links to member institutions of the council and activities of the CPT are found at this site.

  http://www.macomb.k12.mi.us/cpt/cpt.htm
- International Reading Association.
  Publishes *The Reading Teacher,* the *Journal of Adolescent & Adult Literacy,* the *Reading Research Quarterly, Lectura y vida,* and *Reading Online.* Visit *Reading Online* at

  http://www.readingonline.org.

  800 Barksday Road, PO Box 8139
  Newark, DE 19714-8139

Videos

- *Block Scheduling: Time to Learn*
  This three-video series provides a guide for making the transition from the traditional high school schedule to block scheduling.

  Available from
  Phi Delta Kappa International
  Center for Professional Development & Services
  PO Box 789
  Bloomington, IN 47402-0789

  http://www.pdkintl.org
- *For Our Student, For Ourselves: Learner-Centered Principles in Practice*
  This multimedia package contains two videos and a facilitator's manual. Three high schools are featured: a small rural school, a school in a suburban setting, and an urban school. Viewers visit these three high schools and observe students, teachers, and administrators using learner-centered principles to guide their educational reform efforts.

  Available from
  Phi Delta Kappa International
  Center for Professional Development & Services
  PO Box 789
  Bloomington, IN 47402-0789

  http://www.pdkintl.org

Web Sites

- **Cyberbee**
  An Internet guide for K–12 teachers. Topics at this site include citing resources, copyright, curriculum ideas, safe kids on-line, Web construction, and Web evaluation.

  http://www.cyberbee.com/
- **Educator's Rest Stop**
  The Educator's Rest Stop contains tips for finding and becoming involved with Internet-based projects along with lists of the most successful projects on the Internet. This site also includes links to Web sites full of Internet projects and other educational sites.

  http://forum.swarthmore.edu/~carol/website.html
- **Kidopedia**
  An on-line encyclopedia written entirely by children from around the world, with instructions for posting entries and for creating local "kidopedias."

  http://rdz.stjohns.edu/kidopedia/

- **Kids' Web**
  A Web guide specifically for children, with links to a variety of sites relating to literature, the arts, science, social studies, games, and sports.

  http://www.npac.syr.edu/textbook/kidsweb/

- **Science Web Sites**
  This San Francisco–based museum provides a site filled with interactive explorations pertaining to science, art, and human perception.

  http://www.exploratorium.com

  A site dedicated to exploring the science of bugs and worms.

  http://www.yucky.com

  A great site to visit for information and activities related to the happenings of our solar system and the universe.

  http://www.spaceday.com

- **Teacher Resource Page**
  Small site with user-friendly organization; especially helpful for elementary teachers beginning to use World Wide Web resources in the classroom.

  http://grove.ufl.edu:80/~klesyk/

Literature Resources

- Association for Library Service to Children. (1995). *The Newbery and Caldecott Awards: A guide to the medal and honor books.* Chicago: American Library Association. This regularly updated resource provides short annotations for the winners and runners-up of these prestigious ALA-sponsored awards.
- *Children's books: Award and prizes.* (1993). New York: The Children's Book Council. This publication lists award-winning titles, as well as state "Children's Choice" awards for exemplary trade books.
- **Children's Literature Gopher**

  This Web site provides information on authors, book awards, conferences and events, on-line texts and journals, other Internet resources, college course syllabi, and more.

  gopher://lib.nmsu.edu:70/11/.subjects/Education/.childlit

- Helbig, A., & Perkins, A. (1994). *This land is your land: A guide to multicultural literature for children and adults.* Westport, CT: Greenwood. An extensive critical listing of titles featuring African Americans, Asian Americans, Hispanic Americans, and Native Americans.
- International Reading Association. "Children's Choices." A list of exemplary, "reader friendly" children's literature, published every October in *The Reading Teacher.*
- International Reading Association. "Teachers' Choices." A list of exemplary "teacher-selected" children's literature, published every November in *The Reading Teacher.*
- **Children's Literature Web Guide**

  This Web site provides links to children's publishers and booksellers, conferences and book events, children's writing, children's literature discussion groups, journals, book reviews, and resources for storytellers, parents, teachers, writers, and illustrators.

  http//www.ucalgary.ca/~dkbrown/index.html

8 Assessment and Evaluation

THIS CHAPTER

- Defines the terms *assessment* and *evaluation* and explains how these concepts are interrelated
- Identifies significant issues surrounding assessment practices in today's schools
- Identifies and discusses the major purposes of assessment and evaluation
- Explains how the terms *reliability, validity,* and *fairness* apply to assessment and evaluation
- Discusses the benefits of authentic assessment
- Describes the four major types of student portfolios and explains their purposes
- Provides examples of a number of alternative assessment strategies
- Explains how parent-teacher and student conferences support an overall assessment program
- Provides information on grading and reporting practices
- Addresses practical issues in assessment reform

— OR —

Authentic opportunities for learners to show what they know

What Are Assessment and Evaluation?

The terms *assessment* and *evaluation* are often used interchangeably. For our purposes, we will refer to **assessment** as the process of collecting performance data and to **evaluation** as the process of bringing meaning to that data. However, other authors may use the term *assessment* in a broader context, and this term may mean different things to different people—parents, educators, and administrators. For example, the definition of assessment offered by Evans and Evans (1992, pp. 69, 70) combines the process of collecting data with the process of bringing meaning to it: "Assessment is a process in which information is systematically gathered concerning a student's qualities, characteristics, behaviors, and the environment to aid in teaching. Assessment consists of more than the simple administration of tests. Rather, it is an ongoing problem-solving process that seeks to understand fully the student's unique skills and abilities and the manner in which he or she interacts with the environment. Information gleaned from assessment can be used to determine educational placements, develop instructional programs that are most appropriate and fully meet the needs of the student, and monitor these programs on a frequent basis."

"Those who believe in our ability do more than stimulate us. . . . They create for us an atmosphere in which it becomes easier for us to succeed."

John Lancaster Spaulding

Since you have been a student for many years, no doubt you've had many personal experiences with assessment and evaluation, and you may still feel the effects of some of those experiences, both positive and negative. For example, although she is now a few decades beyond fourth grade, Therese still bristles when she thinks about the grade she received in reading at the end of that year in school. On a happier note, she often revels in the memory of her senior year culminating piano recital.

In your teaching journal, share one personal assessment experience from elementary school, either positive or negative, that continues to affect you. After sharing your experience, discuss the feelings that surround this school memory.

Assessment and Evaluation: Interrelated Concepts

Assessment and evaluation are best thought of as interrelated concepts. Assessment refers to data collection and the gathering of evidence (Routman, 1991). Assessment also can be thought of as the ongoing act of collecting various types of information about individuals or groups of individuals in order to understand them better. After the data are collected, evaluation is necessary. Evaluation implies bringing meaning to data through interpretation, analysis, and reflection (Routman, 1991). Evaluation involves the development of a judgment regarding the quality, value, or worth of assessment data, based upon established criteria. Both assessment and evaluation are necessary components of the process that often is referred to as assessment.

Looking Back, Looking Forward—Joining an Assessment Revolution in Progress

The topic of assessment and evaluation is at center stage in many educational circles today. These processes are undergoing such tumultuous change that many educators have suggested that we are experiencing an assessment revolution. This chapter will help you become aware of key issues in assessment and evaluation and deal effectively with them throughout your teaching life.

You've learned a lot about instructional strategies, developing integrative units, and writing lesson plans. Now, begin to think about how you will assess and evaluate students' performance on the lessons, activities, and integrative units you've been planning. Also, ponder how you will assess and evaluate students' responses to the dynamic, higher-level questions you've crafted. Will you assign a grade? Use a checklist or rubric? What assessment and evaluation options will you have? Will you have to administer achievement tests? And how will you report the information you gather to parents?

Before you plan where to go next, it's helpful to know where you've been—especially when you're in the midst of a revolution! After a brief historical review of assessment and evaluation, we'll discuss the differences between alternative assessment and traditional assessment and examine best practices in assessment and evaluation. We'll also highlight significant issues surrounding assessment and evaluation today—understanding cultural and language differences, as well as assessing and evaluating special needs and at-risk students. Finally, we'll share a number of alternative assessment strategies and provide examples and explanations to get you started designing an alternative assessment program. Because you are probably most familiar with traditional rather than alternative assessment practices, you should be prepared to entertain some new ideas. Remember, minds are like parachutes—they function best when open!

Assessment and Evaluation: A Historical Perspective

The primary purpose of early assessment was to exclude certain individuals—from society, from schools, and from the military (Stewart, Choate, & Poteet, 1995). Remember our discussion in Chapter 8 of the purposes of schools and schooling? One of the purposes we discussed was sorting and selecting students, a function that schools began performing in the 1930s and still actively perform today. Teachers sort students into high, middle, and low ability groups; decide who should and should not be included in gifted or remedial programs; and recommend students for resource services (such as reading recovery, assistance with their speech, or intervention to help students deal with learning disabilities).

The testing movement began to flourish in the United States in the early twentieth century, prompted by the work of Alfred Binet and his colleagues. Their efforts culminated in the 1905 Binet-Simon Scale, considered the first modern intelligence test. Lewis Terman standardized the Binet-Simon Scale in 1916 and developed the Stanford-Binet Intelligence Test (Tindal & Marston, 1990).

During the 1920s and 1930s (following World War I), America's population became increasingly diverse. At the time it was popular to think of the United States as a "great melting pot," and so U.S. schools provided a homogenizing experience, with the goal of making everyone the same rather than celebrating differences. In the midst of this focus on sameness, increasing numbers of students entered American schools, as immigrants continued to arrive in huge

numbers. This influx led to the "assembly line school" concept, which was further supported by the introduction of standardized achievement tests (Stiggins, 1997).

In 1939, David Wechsler introduced the Wechsler Intelligence Scale, which focused on what was regarded as the global nature of intelligence. Testing became a common practice in U.S. schools. Many new tests were developed, and norm-referenced testing continued to evolve from the 1930s to the 1950s (Stewart, Choate, & Poteet, 1995). Thereafter, standardized testing continued to grow, becoming a twentieth-century educational phenomenon. A 1950 high school graduate might have taken three standardized tests during his or her K–12 education, whereas a student finishing school in 1989 would have taken as many as twenty-one standardized tests. Add the time required just to take all these tests to the time spent preparing for them, and you can easily appreciate the effect that the growth in standardized testing has had on instructional time over the years (Perrone, 1990). Increased emphasis on testing and test results has resulted in test-driven curricula in many districts. Think back to your school days. How many standardized tests did you take between kindergarten and twelfth grade? How did they affect the education you received?

After World War II, criterion-referenced tests (generally, teacher-made tests or textbook chapter tests), designed to measure academic achievement, began to play a critical role in education (Stewart, Choate, & Poteet, 1995). In addition to the growth in testing, services for students with disabilities also grew tremendously following World War II (McLoughlin & Lewis, 1994). Many abuses and criticisms of assessment accompanied this growth. In 1957, much attention was focused on the overall quality of American education after the Soviet Union successfully launched the first Earth-orbiting satellite, Sputnik. Since then, testing has been used both to laud and to decry the status of American education (Poteet, Choate, & Stewart, 1993). In 1975, Public Law 94-142, the Education for All Handicapped Children Act, significantly improved the assessment of students with disabilities. This legislation called for fair, appropriate, multifaceted assessment implemented by a multidisciplinary team.

In 1983, following the publication of *A Nation at Risk*, a report that severely criticized the quality of American education, many states developed statewide testing programs as part of their reform efforts (Stewart, Choate, & Poteet, 1995). An update on state assessments is provided at the end of this chapter, and a discussion of the impact that *A Nation at Risk* had on education reform is included in Chapter 12.

Assessment is big business today in American schools. More than 20 million standardized tests are administered annually to 44 million students in elementary and secondary schools (Ysseldyke, Algozzine, & Thurlow, 1992). And as the assessment field has continued to evolve, both purposes and procedures have changed dramatically. These changes have been wholeheartedly endorsed by some educators and bitterly rejected by others. Assessment is, indeed, a controversial topic!

Measuring intelligence is another very controversial issue today—one that deserves your attention. The debate over intelligence testing centers on two

concerns: whether intelligence is one entity or is made up of a set of factors, and whether intelligence is changeable (McLoughlin & Lewis, 1994).

Because we have discussed multiple intelligence theory and the eight ways of knowing, you can begin to understand the complexity of assessing intelligence. It's important to be aware of the dangers in regarding IQ scores as the only window on students' abilities.

How Do Teachers Deal with the Assessment Dilemma?

How is the assessment revolution affecting real kids and real teachers? The conflicting demands of reform efforts and standardized tests can confuse the teaching/learning process. "Amid the hubbub of school reform, teachers are actually receiving a schizophrenic message: teach in creative, innovative, constructive ways, but tell your students that they will be tested differently" (Daniels & Bizar, 1998, p. 205). Teaching methods that are effective at raising scores on tests that focus on lower-level thinking tasks—knowledge and comprehension—are the opposite of strategies that promote complex cognitive thinking, problem solving, and creativity. Unfortunately, "the people running our country's 'official' education reform, that is, politicians, state legislators, governors, and blue-ribbon panels of businessmen, don't know or care much about the structures of Best Practice education. . . . But they do care a lot—a whole lot—about test scores" (Daniels & Bizar, 1998, p. 204).

How does a teacher deal with these contradictions in the classroom? First of all, realize that standardized tests are here to stay, and accept that reality. Historically, American society has placed great value on test results. It's your responsibility as a teacher to understand the purposes and value of a variety of different assessment tools and to advocate for *appropriate* assessment. This means understanding what information is gleaned from specific tests and how this information should be shared with students, parents, and the community. Take, for example, the achievement test scores in your own school records. Do you understand how many ways your scores have been reported—in terms of raw scores, stanines, percentiles, percentages, and grade equivalents? Can you interpret the meaning of each score in each subtest and how it compares to the composite score? If you're not confident of your ability to interpret assessment information, set some learning goals for your upcoming coursework in assessment. For the time being, remember that standardized tests are designed to provide a broad indication of student achievement rather than a high-resolution portrait of it. They provide little information of value for day-to-day instruction (Stiggins, 1997).

■ Traditional Assessment and Alternative Assessment: What's the Difference?

Assessment reform initiatives are plentiful. They're reflected in the rise of alternative assessments, changing curricula, and the expectation that teachers and learners will embrace new teaching and learning paradigms. These include literature-based instruction; whole-language instruction; interdisciplinary, integrated teaching; collaborative teaching; cooperative learning;

inclusion; authentic curricula and assessment; and an emphasis on developing higher-order thinking, problem solving, and performance. By now, we're confident that these approaches are familiar to you. These best-practice approaches will serve as the warp upon which you weave your teaching and your assessment program.

Habgood (1993, p. 81) describes the difference between traditional and alternative assessment this way:

> *The essential difference between traditional assessment (teacher-made tests) and alternative assessment seems to be learner self-regulation. Typically, in a multiple choice testing format, the student is given his or her grade with a rationale explaining why a particular answer is correct. By comparison, alternative assessment makes available the scoring criterion or rubric in the beginning, and the student constantly applies the criterion during the assessment task. The student grades the final work and perhaps compares its merits to other works produced. This has exciting possibilities for the world of work. . . . By giving students practice in self-assessment measured against specific criteria, we are preparing them for employment.*

Many labels are used to describe alternatives to traditional, standardized assessment, including *direct assessment, performance assessment, authentic assessment,* and *portfolio assessment.* Although each type of assessment emphasizes subtle differences, "all exhibit two central features: first, all are viewed as alternatives to traditional multiple choice, standardized achievement tests; and, second, all refer to direct examination of student performance on significant tasks that are relevant to life outside of school" (Worthen, 1993, p. 445).

What Purposes Do Assessment and Evaluation Serve?

Assessment and evaluation systems serve multiple purposes:

Determining students' prior knowledge. This type of evaluation can be performed dynamically, in the context of teaching, or more formally, based on specially designed tests that identify students' strengths and weaknesses in specific areas. Determinations of students' prior knowledge provide a basis for curricular planning and change. We've discussed brainstorming and curriculum webbing as initial steps in designing integrative units. These are forms of preassessment that measure students' prior knowledge.

Providing data for curricular revisions. Evaluation is a feedback mechanism for educational improvement. When student performance is viewed as an indicator of program effectiveness, the likelihood of curriculum improvement increases, and a major contribution is made to improving the quality of education. Curricula are informally revised by the teacher on a moment-by-

moment basis, as the lesson or activity emerges in the classroom context. It's also important that curricula be officially revised, based on program evaluation data.

Offering constructive feedback to students. Students learn most effectively when they receive feedback that facilitates and motivates their learning. This feedback may come from their teachers, from other support professionals, or from their peers. It's a continual challenge to stretch students without breaking them.

Allowing learners to show what they know. As you know, students bring with them to the teaching/learning process a variety of strengths and types of intelligences. Consequently, it's the teacher's responsibility to promote students' ability to perform and share their abilities in a variety of contexts.

Anticipating learners' educational needs. Educational needs are the products of judgments about what counts in educational matters. It's important to remember that your values—both cultural and educational—will influence the decisions you'll make regarding the future educational needs of your students.

Determining if curricular objectives have been achieved. Educational programs should be driven by clearly formulated objectives. Objectives are the criteria for determining whether the program has been effective (Eisner, 1994).

The public has come to expect grades, because that is what education has provided. Alternatives in assessment and evaluation are necessary in order to move beyond grades as the only tool that educators use to communicate assessment and evaluation information.

Measuring Assessment Quality

Consider the following three questions:

1. How accurate is the information gathered?
2. How confident are you in drawing conclusions about a student's performance from the assessment score?
3. Is the assessment fair to all students?

Each of these questions corresponds with one of the three fundamental psychometric concepts used in assessment research: reliability, validity, and fairness.

Reliability, Validity, and Fairness

When reviewing assessments, it's important to evaluate the reliability, validity, and fairness of each assessment tool you have used. **Reliability** refers to the accuracy of students' scores or outcomes. It refers to the degree to which simi-

lar scores are likely to be produced in subsequent administrations of a given test or alternative assessment. A test or alternative assessment is highly reliable if it minimizes chance factors that can lead to inaccurate scores or outcomes.

Validity concerns how closely the test or alternative assessment measures what it is intended to measure. Does the test or alternative assessment allow accurate conclusions to be made about the knowledge, skills, or dispositions being assessed? How closely related or analogous are the knowledge, skills, or dispositions being assessed and the test or alternative assessment?

Fairness measures the likelihood that all students of equivalent ability will achieve similar scores or outcomes. If earning a good score or outcome depends partly on demographic factors (such as students' gender, race, ethnicity, or socioeconomic status), the assessment is considered low in fairness (Rahn, Stecher, Goodman & Alt, 1997).

Assessing the Quality of Your Assessment Program

The National Forum on Assessment, a coalition of education and civil rights organizations, views high-quality assessment as essential to high-quality education. The forum asserts that powerful, fair assessment methods used by skilled educators are necessary for educating *all* children to high standards (National Center for Fair and Open Testing, 1995).

The following principles are intended to facilitate the transformation of assessment practices. They can guide changes in curriculum and instruction that are designed to improve student learning.

Improve and support student learning. Assessment practices and methods should be consistent with teacher and district learning goals, the curriculum instruction, and current knowledge regarding how students learn. In-class assessment (assessment that is integrated with the curriculum and instruction) is the primary means of assessment. Information for accountability and improvement comes from regular, continuing work of students in schools and from large-scale (statewide or national) assessment. Rigorous technical standards for assessment must be developed and used to ensure high-quality assessments and to monitor the actual educational consequences of assessment.

Assess and evaluate performance fairly. Assessment systems must ensure that all students receive fair treatment, so as not to limit students' present and future opportunities. Assessments allow for multiple methods to assess student progress and are created or adapted appropriately to meet the specific needs of particular populations, such as English as a second language learners and students with disabilities.

Draw on professional collaboration and development. Effective assessment systems depend on teachers and other educators who understand the full range of assessment purposes, use a variety of suitable methods, work collaboratively, and participate in ongoing professional development to

improve their capability as assessors. Schools of education prepare teachers and other educators well for assessing a diverse student population. Educators determine and participate in professional development related to assessment and work together to improve their assessment programs.

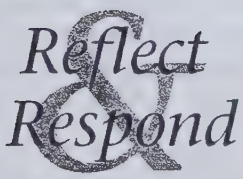
Encourage community participation and communication. Parents, students, and members of the community should join a variety of experts, teachers, and other educators in shaping the assessment system. Discussion of assessment purposes and methods should involve a wide range of people interested in education. Educators, schools, districts, and states should clearly and regularly discuss assessment system practices and student and program progress with students, families, and the community. Examples of assessments and student work should be made available to parents and the community.

Allow for regular reviews. Assessment systems should be regularly reviewed and improved to ensure that they are beneficial to all students. Reviewers should include stakeholders in the education system and independent experts.

What Is Best Practice in Assessment and Evaluation?

Zemelman, Daniels, and Hyde (1998) provide the following list of best-practice indicators as another way of focusing on high-quality assessment and evaluation:

- The purpose of most assessment is formative, not summative.
- Most evaluation is descriptive or narrative.
- Students are involved in record keeping and in judging their own work.
- Teachers triangulate their assessment.
- Evaluation activities are part of instruction.
- Teachers spend a moderate amount of time on evaluation.
- Where possible, competitive grading systems are abolished or deemphasized.
- Parent education programs help community members understand the value of new approaches to evaluation.



Think about instructional changes that would have resulted in your preK–12 education if the criteria suggested by Zemelman, Daniels, and Hyde had been appropriately followed.

In your teaching journal, write about three evaluation experiences you have had, and indicate whether those experiences supported or did not support best practice.

The Challenge of Designing Equitable Assessment and Evaluation Systems

Ensuring equity in assessment involves examining deep attitudes and values regarding the social purposes of assessment. As discussed previously, a historic and central purpose of assessment has been to sort or rank students according to presumed inherent abilities—in effect, to create winners and losers. The current assessment reform movement represents a major shift in values, toward using assessment to ensure that all students have equitable opportunities to learn and achieve at the highest possible level (Gordon, 1993).

■ Alternative Assessment of Nondominant Language and Cultural Groups

Alternative assessment of nondominant language and cultural groups is of enormous interest and concern because there is hope that alternative assessments will reveal what these students know and can do, and there is fear that the same inequities that are associated with traditional norm-referenced tests will recur (Estrin, 1993).

Unlike norm-referenced assessments, alternative assessments have the potential to inform instructional planning by linking directly to students' learning experiences and to the contexts of those experiences, including the cultural contexts of a pluralistic student population. Other desired outcomes of using alternative assessments with nondominant language and cultural groups include the following (Estrin, 1993):

- Students will be more intensely engaged as participants in their own learning.
- Student growth and achievement will be communicated more effectively to parents and the community.
- Teachers will be stimulated to improve their teaching.

■ At-Risk Students and Alternative Assessment

Teachers would like to believe that they do what they do to help students learn. However, in reality they often do what they do to help students learn to take tests. The purposes of the writing, grammar, and spelling tests students take are to compare learners with one another, to place students at different developmental levels, and to diagnose students' learning problems, often for the purpose of removing at-risk students from regular classrooms. The result can be harmful, particularly to low-achieving students. "Students at risk of failure in our public schools face a daily barrage of low grades and evaluations that continually confirm their secret suspicions that they are not able to learn" (Townsend, Fu, & Lamme, 1997, p. 71).

It's no fun to be constantly reminded that you are failing or not doing as well as the student who sits in front of you. It's especially stressful for students who deal with daily family conflicts, hunger, physical or emotional abuse, or low self-concept to carry home a bookbag full of red marks, negative com-

ments, and low grades. By contrast, learners flourish when parents and teachers take an interest in students' development, focus on their strengths, and set realistic instructional goals.

The use of IQ scores to place students in special education programs is a significant concern, given the limitations of intelligence testing, discussed earlier. Assessment bias in special education is part of a larger debate that touches on equity and the role that race, perceptions of intelligence, income, and gender play in assessment. The diversity needs of America's youth are not being addressed by many assessment and evaluation programs throughout the country. Is litigation the only answer to this pressing dilemma? How are learners' needs to be served? As Lindfors (1987, p. 412) argues, "There has been and continues to be in our society a deep and pervasive confusion of 'cognitive ability'

New teachers talk

What do you find to be the most challenging about providing learners with a variety of authentic opportunities to show what they know and can do? Describe an alternative assessment strategy that you have found to be particularly effective.

In today's classrooms, learners come from many diverse backgrounds. Learners speak different languages, live in a variety of family structures, experience both wealth and poverty, practice different religions, and represent many ethnicities. Additionally, learners have varied learning styles and perform at different levels. They have a variety of interests and excel in different areas. When a teacher decides to provide learners with authentic opportunities, it is best to connect that learning to the students' interests and previous knowledge. Because learners' backgrounds are so diverse, it is challenging for teachers to find links that best meet the needs of all learners. It is necessary for teachers to teach learners in ways that engage them in learning and make learning meaningful.

An assessment strategy that I have found to be successful is to provide learners with opportunities to apply their knowledge to "real-life" situations and their own personal experiences. Clearly explaining your expectations will help learners produce quality work. For example, learners could write a letter to a character in a story, providing advice or a possible solution to a problem, rather than writing a book report. Or, students could take on the role of a travel agent who must investigate a state or country (of their choice) and design a travel brochure and poster to advertise and promote travel to that area. This scenario would be more meaningful than having the students write a research paper.

Although it is challenging to provide learners with a variety of authentic assessment opportunities, it is critically important. Students who are engaged in hands-on, real activities will be able to show what they know and can do in a variety of ways.

—SHANA, Preservice Teacher

I use the Work Sampling Assessment System and love sharing the students' portfolios with their families during parent-teacher conferences. When the students are involved in choosing the work samples that go into the portfolios, they are en-

with 'school success.'" This confusion impinges on the lives of at-risk and special needs students, creating disappointment and despair.

■ Recommendations for Moving Toward Equitable Alternatives in Assessment and Evaluation

How can you prepare now for designing equitable assessment and evaluation systems once you begin your practice? Review this list of recommendations, and begin thinking about your professional development goals that relate to assessment and evaluation issues (Estrin, 1993):

1. Set clear student assessment targets or performance goals.
2. Be flexible.

couraged to think about what they did and why—to actually think about their own learning. I believe this metacognitive process is very important. Both the Work Sampling Assessment and the Project approach, which are implemented in my classroom, encourage students to think!

—VICTORIA, Third-Year Teacher

I have found it to be quite challenging to assess students according to their own individual abilities and skills. I constantly need to reflect upon what I have taught to ensure that I am assessing based on my objectives.

Portfolios have been an excellent form of assessment in my classroom. The students save their projects, interviews, and portraits in a file throughout the semester. At the end of the semester, the students and I conference about what they should put into their permanent portfolios. These portfolios follow them throughout elementary school.

During the portfolio conferences, we discuss each learner's accomplishments and growth throughout the semester. We also target some areas that need improvement. I feel this makes the students accountable and responsible for their learning. It also helps them develop goals for the next semester.

—SHAUNA, First-Year Teacher

Authors' Analysis

These three teachers all struggle with the challenges of authentic assessment. However, because they've experienced the power of authentic assessment in their classrooms, they're committed to providing many opportunities for students to show what they know and are able to do. We were extremely impressed with their learner-focused responses! And we applaud these teachers for their willingness to move beyond traditional assessment.

Now It's Your Turn

It might be most meaningful for you to respond to this question based on your own experiences as a learner.

In your teaching journal, discuss at least three challenges you have faced when communicating what you know and can do in a classroom situation. Describe an alternative assessment strategy that might have enhanced your ability to communicate and demonstrate your competencies.

3. Collaborate with members of your local community to learn what is valued, and incorporate community resources and values into your classroom.
4. Use multiple sources of performance data when evaluating students.
5. Be aware of the powerful influence of student motivation and interest on assessment programs.
6. Adapt assessment instruments to meet the personalized needs and interests of your students.
7. Enhance your assessment knowledge base by incorporating culturally responsive content and goals in your professional development program.

What Do Teachers Need to Know and Be Able to Do to Assess and Evaluate Students?

What do teachers need to know and be able to do to assess and evaluate students? Here are some points to keep in mind, taken from the Washington State Classroom Assessment Competencies for Teachers (Stiggins, 1997, p. 107):

1. Teachers must be competent masters of each of the achievement expectations they hold as important for their students. That mastery must be at a sufficient level of understanding for teachers to be able to translate those expectations into quality assessments.
2. Teachers must understand all the various purposes of assessment in schools and know how each level of assessment use (from classroom to building to district to state and beyond) impacts the quality of a student's schooling experience.
3. Teachers must understand and be able to apply standards of assessment quality.
4. Teachers must be able to identify an appropriate assessment method from among several available options, and they must be able either to select previously developed assessments, or develop new assessments that fit the contexts.
5. Teachers must be able to store, retrieve, and communicate assessment results to users of that information in a timely manner that assures complete and accurate understanding of those results on the part of all relevant users.
6. Teachers must know and be able to meet standards of professional (fair, legal, and ethical) practice in conducting classroom assessment practices.
7. Teachers must understand and remain sensitive to the personal consequences of their assessments for their students and the families of those students.

As you develop these competencies, it is essential for you to experience alternative assessment as a learner yourself. Perhaps your professors are utilizing performance-based assessment in your teacher education courses. As we move into the twenty-first century, many university programs are incorporating alternative assessments, such as portfolios and competency-based rubrics, into their professional preparation programs. Emphasis on the reciprocal relationship between assessment and curriculum requires changes in teacher preparation programs—changes that will dramatically influence the ways teachers teach (Poteet, Choate, & Stewart, 1993).

Use the information in the remainder of this chapter to begin moving toward achieving your goals. With that recommendation in mind, we now move to a section on integrating assessment and evaluation into day-to-day teaching. In this section we share many assessment strategies that will become a part of your teaching life. Your preparation to provide leadership during the ongoing assessment revolution begins now!

Balancing Your Assessment Program: A Quadrant Approach

We recommend that you divide your assessment program into the four areas (quadrants) outlined in Figure 8.1 and determine what kinds of data you will collect. You'll be able to determine your collection strategies after you decide

Figure 8.1 Balancing Your Assessment Program: The Quadrant Approach

Observation of Process	Observation of Product
anecdotal records	literature response logs
interviews	reflection logs
retellings	student-created questions/tests
shared reading/writing experiences	writing samples (plays, poems)
audiotapes	projects
videotapes	graphs/charts/illustrations
oral presentations	research reports
learning centers	portfolios
Contextualized Measures	**Decontextualized Measures**
inventories, checklists	standardized achievement tests
teacher-made tests	state competency tests
informal reading inventories	criterion-referenced tests
interest/attitude surveys	norm-referenced tests
dictations	diagnostic tests
holistic writing assessment	readiness tests

(Adapted from Anthony, Johnson, Mickelson, & Preece, 1988)

on the purpose of your assessment. For example, if you're assessing students, the focus will be on the process as well as on student products; if you're assessing the effectiveness of your program, the focus will be on a number of contextualized and decontextualized measures.

Sequencing the Assessment and Evaluation Process

It's helpful to have a sequence in mind when you begin designing your assessment and evaluation system. You'll begin by observing. Then you'll collect data, record the observations and data, interpret and analyze the observations and data, report the information, and apply your findings to the teaching/learning process (see Figure 8.2). If you think of this process as circular, you'll be able to move forward and backward through the cycle, based on each student's particular situation. Take this scenario, for example:

> Jody, a new student, joins your fourth-grade classroom late in November. Your observations, the data you've collected, and the information you've recorded lead you to refer Jody for diagnostic testing by early January. After

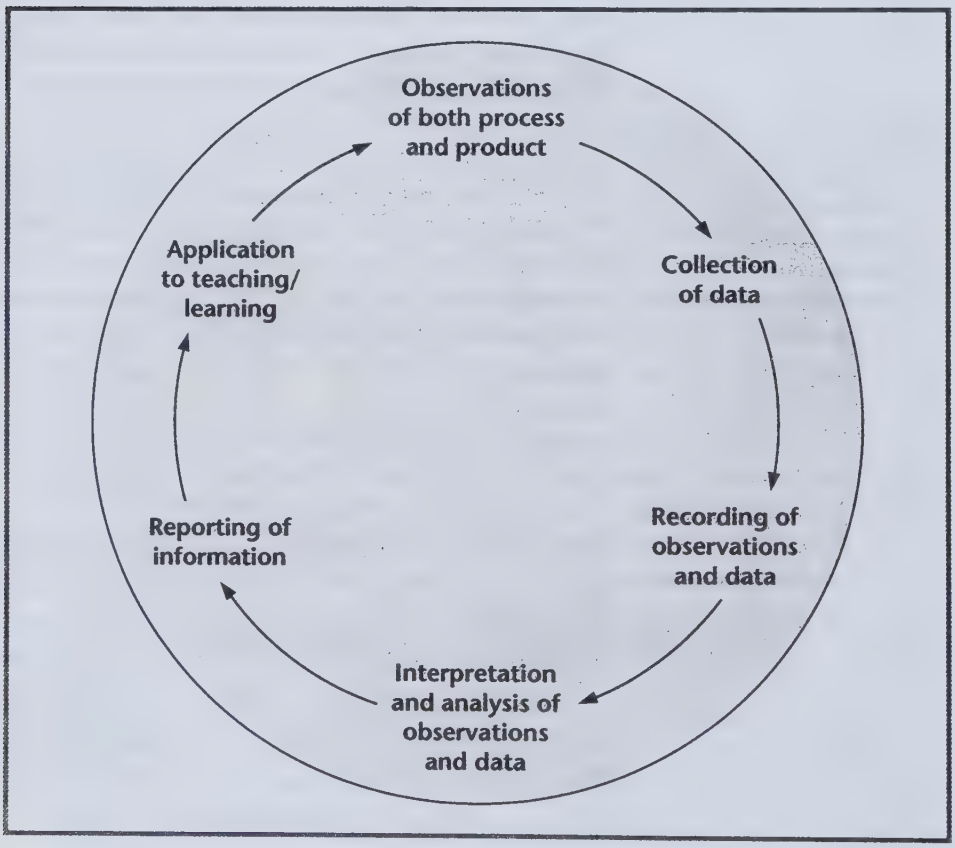

Observations of both process and product
Collection of data
Recording of observations and data
Interpretation and analysis of observations and data
Reporting of information
Application to teaching/ learning

Figure 8.2
The Cycle of Assessment and Evaluation

meeting with her parents and receiving their written permission for this testing, the process, in essence, begins again. The special services staff observe Jody in a variety of contexts, record data based on their observations and your referral comments, interpret and analyze the information, and report their conclusions in a conference. They recommend special education services, so an individualized education plan (IEP) will be developed by special services staff and then signed by Jody's parents. After the special services team completes their assessment and evaluation, they meet with the parents for an IEP conference. As the regular education teacher, you work collaboratively with the special services team to develop an inclusionary plan that meets Jody's needs.

The next few sections provide examples of real-life alternative assessments that you can consider for your own use. **Alternative assessment** refers to any type of assessment in which students *create* responses, as opposed to choosing them from a given list. Many resources are available to help you develop alternative assessments for your lesson plans and integrative units. It is our hope that this overview will get you to first base. From there, you'll continue to add to your knowledge and experiential base—and, we hope, hit many home runs before you end your teaching career!

Reflect & Respond

Throughout your teacher preparation program, you'll develop knowledge, performances, and dispositions that will enhance your ability to meaningfully and appropriately assess and evaluate your future students. Take a few moments to assess your professional development at this time. After reading the following statements, rate your competency with regard to assessment and evaluation on a scale of 1 to 10, with 1 being low and 10 being high (Routman, 1991):

- I have a thorough knowledge of developmental learning processes and curricula.
- I can clearly articulate my beliefs about assessment and evaluation.
- I have knowledge and experience in collecting, recording, interpreting, and analyzing multiple sources of data.
- I am flexible and willing to try out and value multiple evaluation procedures to gain a complete picture of the learner.
- I have made a strong commitment to implementing meaningful assessment and evaluation systems in my future classrooms.

In your teaching journal, set some new goals, or focus the goals that you may have developed after contemplating the section on equitable assessment (see page 397). Make a list of the strengths you will bring to the assessment process, as well as the challenges you may encounter.

Performance Assessment and Authentic Assessment

For a **performance assessment,** students demonstrate their competencies or knowledge by creating an answer or developing a product (Feuer & Fulton, 1993). Performance assessments are the norm in many countries and have been preferred by vocational education for a number of years (Stewart, Choate, & Poteet, 1995). Many of the assessments we'll be suggesting here, and many of the instructional strategies and structures we suggested in previous chapters, qualify as performance assessments (such as projects, interviews, oral presentations, constructed-response questions in which students create their own answers, essays, experiments, demonstrations, and portfolios).

Authentic assessment is actually a subset of performance assessment that requires realistic expectations set in real-life contexts. Wiggins (1989) describes four basic characteristics of authentic assessment:

1. It is designed to represent performance in the field.
2. The criteria for attaining stated objectives are given far greater attention during the teaching and learning process than the attention given to criteria in traditional assessment approaches.
3. Student self-assessment plays an integral role.
4. Students are expected to present and defend their work to ensure genuine mastery.

Authentic assessments provide opportunities for students to show what they know and are able to do within and across a number of disciplines. Some examples of authentic assessment items include an audiotape of a student reading to a peer; a log of books read, with critiques; a debate on a current issue; an article for the school paper; a design for a room or bulletin board; a performance in a play; an original recipe; an original investigation and report; a map of the community; and an advertising campaign for a political candidate (Stewart, Choate, & Poteet, 1995).

Performance Assessment for Special Needs Students

Although performance assessment is gaining popularity in general education, its uptake in special education has been slower paced (Poteet, Choate, & Stewart, 1993). Even though most states include one or more performance components in their statewide assessment programs, provisions for students with disabilities vary (Roeber, Bond, & van der Ploeg, 1993). This is somewhat concerning, given the fact that the principles that underpin performance assessment—such as behavioral, curriculum-based, direct, ecological, and functional assessment—have historically prevailed in special education (Coutinho & Malouf, 1993). And as Meisels (1987, p. 71) points out, "Tests that exclude children from public education services or that delay their access to the educational

mainstream . . . are antithetical to legal and constitutional rights to free education and equal protection."

Previously we presented some assessment issues that affect nondominant language and cultural groups, as well as at-risk and special needs students. Although performance assessment is more widely accepted in regular education than in special needs education, it's extremely important that you prepare performance-based assessments appropriate for the students with special needs who will be members of your future classrooms. Teaming with special educators and resource staff in your schools will be critical as you design your alternative assessment and evaluation system. Remember that you have been invited to lead—not follow.

PORTFOLIOS

Portfolio assessment refers to assessment based on "a collection of selected student work—products of performance assessment that serve as the basis for ongoing evaluation but may or may not reflect authentic tasks" (Stewart, Choate, & Poteet, 1995, p. 22). Portfolio assessment provides "records of a student's work over time and in a variety of modes to show the depth, breadth, and development of the student's abilities; it is the purposeful and systematic collection of student work that reflects accomplishment relative to specific instructional goals" (Pierce & O'Malley, 1992, p. 2). Examples of items that students may choose to add to their portfolios include an audiotape of a story retelling; a journal of writing ideas; a student-written book; descriptions and diagrams of problem-solving processes; journal notes recording mathematical investigations; a computer-generated map of a student's neighborhood; sketches, paintings, sculptures, and photographs; journal entries that include self-evaluations; representative work samples (all discipline areas); case studies; awards and honors; photographs; and reflections (Stewart, Choate, & Poteet, 1995).

Portfolios offer opportunities for the entire educational community—students, parents, district personnel, and other interested parties—to view the intersection between instruction and assessment (Paulson, Paulson, & Meyer, 1991). Portfolios should be constructed with five elements in mind: collaboration, an expanded view of learning and knowledge, a place to view processes, exploration of multiple perspectives, and reflection and self-assessment (Seely, 1994).

It's also important that you and your students determine the purposes of classroom portfolios, as the first step in the portfolio assessment process. We have suggested a number of examples of items that students could include in their portfolios. The following questions will help you talk with your students about why they are constructing portfolios and will facilitate the goal-setting process:

- Why will you be designing a portfolio?
- What purpose will the portfolio serve? How will it help you learn?

- What data will you collect for it?
- How much data will you collect, and how often will you collect them?
- How will the portfolio be evaluated?

Types of Portfolios

There are four main types of portfolios—showcase portfolios, documentation portfolios, evaluation portfolios, and process portfolios. The type of portfolio to use in a given situation depends on the purpose of the assessment.

■ Showcase Portfolios

Showcase portfolios are the type of portfolio most commonly used in classrooms today. A **showcase portfolio** is a collection of work that both a student and his or her teacher believe represents that student's best efforts (Seely, 1994). "Because the student selects most of the entries, a showcase portfolio paints a unique portrait of the individual over time" (Valencia & Calfee, 1991).

■ Documentation Portfolios

Documentation portfolios are the second most commonly used type of student portfolio. A **documentation portfolio** is a collection of work that provides evidence of student learning and growth. Virtually any piece of evidence that the teacher and student believe to be pertinent to documenting the student's learning can be included in a documentation portfolio. Included in the collection are rough drafts, notes from brainstorming activities, various math tasks, rubrics, checklists, rating scales, anecdotal records, photographs, peer evaluations, self-evaluations, and a variety of projects (Seely, 1994).

■ Evaluation Portfolios

The purpose of the **evaluation portfolio** is to evaluate students on preselected tasks, using predetermined criteria. Examples of evaluation portfolios include Vermont's Literacy Assessment Project and California's Literacy Assessment Project (Seely, 1994). These evaluation portfolios have been designed as alternative state assessments.

■ Process Portfolios

A fourth type of portfolio assessment is the process portfolio. A **process portfolio** is a collection of items and artifacts demonstrating work that typically is a part of a larger project. The learning process and self-reflection are highly valued in this portfolio. What makes a process portfolio different from a documentation portfolio, which has similar purposes, is the collection of materials. Items in a process portfolio include drafts, notes, and lots of evidence of reflection that supports the learning process (Seely, 1994).

Figure 8.3
Electronic Portfolios

ADVANTAGES

Teachers can
- Import large quantities of information and data
- Attach endless work samples
- Increase authentic communication between home and school
- Prepare students for the school-to-work transition
- Tie student work to district standards
- Easily locate student work
- Cross-reference student work
- Provide students with electronic feedback
- Assess a wide range of skills
- Collect student work over a number of years

Students can
- Engage in self-reflection
- Use multimedia tools to connect work (school) and real life
- Store and retrieve their work
- Make their work accessible to others
- Review their performance
- Make decisions regarding their performance
- Direct and produce their own learning

CHALLENGES
- Electronic portfolios can be expensive.
- Electronic portfolios require a great deal of time.
- Schools/programs may have limited electronic resources.
- Teachers, students, parents, and administrators may lack technical proficiency.
- Teachers may lack professional development.
- Technology may be unevenly distributed for access to all audiences.

■ Electronic Portfolios

Many exciting developments are on the horizon with respect to storing student portfolios. **Electronic portfolios** are simply portfolios that are stored electronically—either on a disk, on a CD-ROM, or on the Web. A number of computer software programs have been designed to help students and teachers develop portfolios. Many peripherals, such as optical scanners and rewritable CD-ROMs, make storing student products electronically a real possibility. Storage is often a critical problem for schools, but electronic portfolios make long-term storage and easy retrieval of student work possible.

After extensively reviewing the literature on electronic portfolios, we've developed a fairly lengthy list of advantages of using them and a much shorter list of challenges (see Figure 8.3). Since the advantages far outweigh the disadvantages, we recommend that you invest some time and energy in contemplating how you will use electronic portfolios.

A number of computer software programs have been designed to help students and teachers develop portfolios. (© José L. Pelaez/THE STOCK MARKET)

Checklists and Rubrics

Checklists are prepared lists of competencies or behaviors that anchor a teacher's observations of a particular student or group of students. Many teachers or teams of teachers design their own checklists to match their curricular goals and objectives. The education literature offers many checklists, from every content area, for your consideration.

Rubrics

■ What Is a Rubric?

A **rubric** is a scoring guide that helps to establish uniformity in evaluation of a student product or performance. A rubric allows for differentiation, using an articulated scale, between various student responses to the same prompt or assigned task. It also defines a range of responses, from excellent to inappropriate.

■ How Many Kinds of Rubrics Are There?

There are two basic types of rubrics: holistic and analytic. A **holistic rubric** results in one score that represents an evaluation of the total performance or

product. An **analytic rubric,** by contrast, separates the total performance or product into several elements or criteria.

■ What Are Some Hints for Developing a Rubric?

Following are some suggestions for developing rubrics:

- Use a project or activity that you have already introduced in the classroom, so you will be familiar with the full range of performances.
- Decide on the expectations and criteria that are important, and select an appropriate type of rubric—analytic or holistic—for them.
- Decide on the range of point scores. An even number, 4 or 6, is usually best, because it reduces the temptation to give the "middle" score.
- Limit the number of criteria you evaluate in one assessment to no more than five or six.
- Begin by describing your acceptable standard. Then describe performance that would qualify as "exceptional," performance that would qualify as "developing" or "in progress," and performance that is clearly unacceptable. Use clear, objective—not subjective—language. Remember our discussion about writing objectives? Clearly written objectives with conditions, observable behaviors, and criterion levels are great allies when it comes to developing rubrics!
- Try out your rubric. See if it works with actual student products or performances. Don't be afraid to revise your rubric.
- Let your students see the rubric *before* they perform the task or create the product. It will help to make the assignment clearer—and your students will know what the expectation is!

TEACHER OBSERVATION

Good teachers always have been kid watchers. The concept of kid watching is not new. It grew out of the child study movement, which reached a peak in the 1930s and provided a great deal of knowledge about human growth and development. Teachers can translate child study into its most universal form: learning about children by watching how they learn (Goodman, 1986). Being a good kid watcher is a necessary skill in an integrated classroom where multimodal assessment is valued. What will you need to know and be able to do to qualify as a "good kid watcher"? We suggest an in-depth understanding of, and experience with, human growth and development. In addition, you will need the following abilities: to apply your knowledge of child development on a continual basis; to listen; to focus on relevant information; to be unbiased; to know what to look for, to describe what you see, and to record and categorize

your observations; to separate your observational descriptions and your evaluative judgments; to design learning environments and activities that promote hands-on learning and collaboration; and to effectively report your observations, in both written and oral form, to parents, colleagues, and administrators.

Does that sound like a tall order? We think so! Being an effective observer requires lots of motivation, as well as lots of practice. Throughout your teacher preparation program, you will have many opportunities to develop your observation skills. The reason we highlight observation in this section is because it is the foundation for teachers' assessments and evaluations. In other words, your assessment and evaluation program will be only as good as your observation skills. Consider this scenario, written in two different ways by two teachers:

TEACHER A

> Two second-grade children, Angel and Elisa, are playing catch with a large red ball on the playground. After approximately three minutes of playing catch, Angel catches the ball, puts it on the ground, and runs off to join Joy and Juan, who are jumping rope. Elisa sits down in the space where she was standing and starts crying quietly. Two other children, Jenny and Jeremy, notice Elisa crying and walk over to her, sit on the ground with her, and ask, "Why are you crying?" Elisa doesn't respond.

TEACHER B

> Angel and Elisa were playing catch, when Angel got bored and decided to do something else. Because Elisa is a big crybaby, she just sat on the ground and whined. Jenny and Jeremy tried to help her, but Elisa is just too stubborn.

As you can imagine, this scenario could continue on and on—in fact, it might be interesting for you to finish the scenario based on what you know about second graders. However, the important questions are these: "How are these two scenarios qualitatively different?" and "Which teacher is the better kid watcher?" Teacher A focuses on relevant information, describes what she is seeing, and appears to be unbiased. Teacher B, by contrast, interjects a number of negative, evaluative words, makes judgments about children's intentions, and seems biased. How might the children in this scenario be evaluated differently by Teacher A and Teacher B on a checklist, rating scale, or rubric? Have you ever been in a situation where you were evaluated unfairly by a teacher who had biased or limited information? Use those experiences to remind yourself how important it is to be a "good kid watcher"!

One way that you can begin to fine-tune your observation skills is to try writing anecdotal records as you observe students and teachers during your clinical experiences. Think of an **anecdotal record** as a written snapshot of an event. Describe the event in detail, including what the students say as well as what they do. Always include key information: the student's name, the date and time, the setting, and the activity. Figure 8.4 provides a sample anecdotal record for you to review.

Figure 8.4
Sample of an Anecdotal Record

Child's name: Sam **Date:** Oct. 5, 1999 **Time:** 11:00 a.m.
Setting: Classroom **Activity:** Journal Writing

Sam slowly picked his journal out of the box and plopped it down on the table. His fists were clenched at his side, and his eyes were downcast. Jamie, one of the other children, asked Sam, "What are you going to write about in your journal?" Sam shouted, "I do not know and I do not care!" Sam stared at the journal cover for fifty seconds, then got up quickly and moved to a corner of the classroom. Sam then began writing and did not stop for ten minutes. After he completed his journal, he walked to the journal storage box calmly, smiled, and put his journal back in the box.

(Adapted from Charbonneau & Reider, 1994, p. 114)

Since you will record and collect a number of anecdotal records, you'll look for patterns in a collection of evidence before making judgments. Let's suppose that Sam consistently gets annoyed at the beginning of journal writing time. After collecting a number of anecdotal records, you might share your observations with Sam, Sam's parents, or the principal to determine an appropriate course of action.

Surveys, Interviews, and Student-Teacher Conferences

Surveys

For a **survey,** students must respond to particular questions or rate items. For example, a mathematics survey might be designed to be completed at the beginning of the year by sixth-grade students, with a threefold purpose: to get to know something about the students' attitudes toward math, to determine the students' histories with math, and to communicate to the students that their ideas will have an important place in the classroom.

Interviews

For an interview, students respond to questions or rate items orally. Interviews can be conducted by peers, classroom volunteers, or teachers. It's important that copious notes be taken documenting the interviewee's responses to the questions. The interviewer should attempt to keep the student engaged in the conversation but shouldn't encourage particular responses. It's critical that interviews be open-ended. Here are some examples of prompts for a reading attitudes and interests interview:

- If you could read anything, what would you read?
- Tell me about one of your favorite authors or illustrators.
- What is one of your favorite magazines? Why do you like it?
- What part of the newspaper do you like best? Why?
- What would you like to learn more about?

Student-Teacher Conferences

In a **student-teacher conference,** the teacher talks with a student to help the student reflect on her or his work. Student-teacher conferences are one of the most underutilized assessment strategies. Even conferences as short as three minutes and spaced as far apart as two weeks can have a surprisingly strong impact on students' learning (Graves, 1983, 1994). Here are some guidelines for conducting student-teacher conferences:

Preparing for Conferences

- Begin by explaining how conferences will work, so students will know what to expect and will come to conferences prepared. You may need to role-play with a few students to get the ball rolling at the beginning of the year.
- Set up a conferencing area in the classroom, with a round table and an appropriate number of chairs for individual, as well as small-group, conferences. The conferencing area should be away from very active areas but fairly centrally located, so you can see what's going on with the other students. To signal collaboration, sit next to the student rather than across the table from him or her. Avoid conferencing over the teacher's desk—if you have one. Both the teacher and the student should be prepared to take notes during the conference; be sure there are appropriate supplies at the conferencing table.
- Set up a workable plan for scheduling conferences. You might schedule conferences with literature study groups, project groups, or research groups on a weekly basis. It's also important to schedule individual conferences with students and to allow them the opportunity to request a conference. Have a clipboard with a sign-up sheet for open conference time each week. Don't let a few students monopolize the conference time, and make it clear that you may request students to conference with you at any time.

Beginning Conferences

- Begin with open-ended statements or questions to get the conference started: "Anna, tell me about your 'insectlopedia.' What part are you working on right now? How do you plan to add the illustrations?" Choose questions that students can answer, and ask questions that will lead students to discover appropriate next steps. If students want to read a short section of their journal, story, or letter, be a good listener—and take this opportunity to jot down some anecdotal notes.

Student-teacher conferences as short as three minutes and spaced as far apart as two weeks can have a surprisingly strong impact on students' learning.
(© Robert Llewellyn)

Ending Conferences

- Keep conferences short—three to five minutes. Ask students to finish each conference by telling you what they will do next, and ask them to write down any further questions for a future conference.

■ Types of Conferences

A number of different conference types have been suggested by Daniels and Bizar (1998). Which of these types of conferences could you incorporate into your novice or student teaching?

Process conference. During this conference, the teacher asks three questions:

What are you working on?

How is it coming?

What will you do next?

Status-of-the-class conference. This is a whole-group conference held at the beginning of a workshop session, during which each student shares what, and with whom, she or he will be working that day.

Read-aloud conference. This type of conference is used when students are working on a writing product (such as a story, letter, or report); they read a section of the piece aloud to a teacher to receive oral feedback.

Summarizing conference. Teachers ask students to tell about their work instead of sharing samples of it.

Content conference. In this type of conference, teachers offer information, suggest authors, or share "mini lessons" for the purpose of developing the meaning and content of a project or report.

Dialogue journal conference. In this format, the teacher and students exchange notes—a written version of a conference.

Editing-publication conference. The purpose of this type of conference is to engage collaboratively in the final proofreading of a draft for publication or display.

Small-group conference. For this type of conference, the teacher meets with a group of three or four students who are working collaboratively in a research study group or on a project. The teacher functions as the thinking coach and promotes collaborative problem solving.

Peer conference. Once students are comfortable with genuine give-and-take conferencing, they can engage in their own conferences—any of the many types highlighted—without the teacher, as long as the conferences are productive, develop student responsibility, and foster educational growth.

Peer Assessment

In **peer assessment,** either an individual student or a small group of three or four students is called on to evaluate the work of one or more peers. Peer evaluation is a powerful strategy, both for the student who is being evaluated and for the student or students who are completing the evaluation.

Self-Assessment

Self-assessment and self-evaluation also are extremely effective strategies for promoting in-depth learning with a focus on continual growth and improvement. You've had many opportunities throughout this book to reflect on your previous and current educational experiences and apply what you're learning. A writing self-assessment might list the student's name, the title or type of writing, and the following open-ended sentences:

I chose this writing for my portfolio because . . .

This writing shows that I have learned . . .

My future goals . . .

Triangulated Assessment

A **triangulated assessment** simply refers to an assessment tool that gives you three windows or modes for evaluating students' competencies. An example of a triangulated assessment is the Work Sampling Assessment (Meisels,

1995), which is triangulated into three parts: checklists in each domain, a portfolio, and a narrative summary.

Teacher Recommendations for Implementing an Alternative Assessment Program

Teachers who were members of an alternative assessment study group (Hange & Rolfe, 1994) made recommendations after six months of developing and implementing alternative assessments in their classrooms. Some of their recommendations were to start small, to develop clear rubrics, to expect to use more time at first, to adapt existing curricula, to have a partner, and to communicate to students and parents that the alternative assessment is highly valued.

Getting Started with Alternative Assessments: Nine Techniques to Try

Educators who have been actively involved in developing alternative assessment systems suggest starting with these activities and items when designing assessment and evaluation programs: group activities; logs and journals; creative and critical problem solving activities; open-ended questions; student-generated questions; authentic performance tasks, concerning real-life problems; portfolios; oral presentations; and research projects (Hange & Rolfe, 1994).

Grading and Report Cards

Screening, Tests, and Grading

Screening, often used to determine students' readiness for school or specific programs, provides an opportunity to look at the developmental skills of a large number of students in a limited amount of time (IASCD Early Childhood Committee, 1989). Because screening provides only a snapshot of students' development and competencies, screening results should not be used to determine individualized learning goals or to design programs for learners. Many types of screening measures are available and, if used appropriately, provide preliminary information that can be extremely helpful in identifying students who may benefit from further diagnostic testing.

The term *test* has many varied interpretations. A test is an instrument used to assess knowledge or skills. We're confident that you've had many experiences with testing during your school days. These experiences have provided you with a beginning understanding of the many types of tests, some formal and some informal, used to assess knowledge and skills. Although a detailed description of testing is beyond the scope of this book, consider the impact

that the different types of tests you've taken—achievement tests, college entrance exams, chapter tests, spelling tests, teacher-made tests—have had on your educational development. Have the tests you've taken provided you with opportunities to show what you know and can do? How have these tests been interpreted? In most cases, tests are graded, and the grade becomes the ultimate focus of the test.

So, what's in a grade? According to Stiggins (1997, p. 409), *grading* is "the process of abstracting a great deal of information into a single symbol for ease of communication." Obviously, the relevance of the symbol that is communicated—the grade—is directly correlated with the quality of the test and the individual interpreting the test. The next section invites you to think about the roles grades have played in your life and how the grades your future students will earn can be effectively communicated to promote student learning and success rather than engender despair and failure. Although alternative assessments provide some options beyond grading, at some time during your teaching career you most likely will be called on to assess students using grades.

Are You Making the Grade?

The majority of parents and communities still expect students to be graded in school, especially in middle school and high school. The fact is, grades play a significant role in many educational programs—including in higher education. Take a moment to reflect on the role grades have played in your life. Many of your most positive (or perhaps most bitter) experiences in school have centered around a grade. Because such significance has traditionally been assigned to the symbols A, B, C, D, and F, many students have received grades that they have not earned. And conversely, many teachers have not assigned grades in an equitable fashion. In fact, grades are one of the realities of higher education that often, in our view, get in the way of professional teacher preparation. Students who are motivated only by grades often lose sight of course objectives and the many opportunities they have to show what they know through well-designed assessment programs.

For this reason, some teacher preparation programs use alternative, nongraded assessment for clinical experiences courses like novice teaching and student teaching—the preprofessional internships—and others are moving in that direction. Rather than receiving a grade, students develop a collection of their performances that show what they know and can do, while their cooperating teachers and university mentors provide evidence in the form of anecdotal records, checklists, rating scales, rubrics, and narrative summaries to document students' performance. Which type of evaluation do you think would be more valuable to you and to future employers?

Grading is often a major concern for new teachers. Begin planning for it now, so you will be effective at assigning grades if they are a required component of your evaluation program when you begin teaching. Remember, the purpose of grades is to communicate student proficiency. Any other purposes are inappropriate.

■ Avoiding Common Grading Problems

The following list provides you with some grading guidelines to help you recognize some typical grading challenges. If you're aware of potential problems, you'll have the opportunity to make decisions regarding how to avoid these common pitfalls (adapted from Stiggins, 1997, p. 434):

- Grade on achievement of prespecified targets only, not on intelligence, effort, attitude, or personality.
- Always rely on the most current information available about student achievement.
- Devise grades that reflect achievement status with respect to preset targets, rather than improvement.
- Decide borderline cases with additional information on achievement.
- Keep grading separate from punishing and rewarding.
- Change all policies that lead to miscommunication about achievement.
- Advise students of grading practices in advance.
- Add further detail (narrative comments) to grade reports when needed.
- Expect individual accountability for learning, even in cooperative environments.
- Give credit for evidence of extra learning—not just for doing extra work.

Redesigning Report Cards

As assessment and evaluation programs change to match changing curricula, many schools and districts are redesigning their reporting systems as well as their report cards. Report cards don't necessarily contain grades, but they might incorporate some type of scale to indicate student performance. However, as many teachers and school districts begin the movement away from grades, Glazer (1995, p. 98) cautions them to be honest about their intentions. "It is important to be honest with yourself and with your children. The alternative tools that you choose must be honest alternatives—not merely camouflaged labels for A, B and C." If grades are required in your school district, you will need to work diligently to develop a fair, equitable, and reasonable system for assigning them. And if you have the opportunity to design a more appropriate, alternative assessment and evaluation system, you will need to provide direction and support and take on a leadership role.

The Metcalf Laboratory School, a preK–8 public school where Therese taught for a number of years, is continuously involved in assessment reform. Working collaboratively, Metcalf teachers have proposed many alternatives to the traditional report card. Although many different formats and prototypes have been drafted over the years, we share with you the First Grade Language Report in Figure 8.5 as one example of a revised report card. Notice that the marking code is, in essence, a rating scale. This format focuses on reporting a student's competencies (rather than grades), as well as his or her continual progress over 4 nine-week periods.

Figure 8.5
First-Grade Language Report

READING	*WRITING*
Reading Attitudes	**Focus**
• Enjoys books	• Adheres to instructions
• Chooses to read	• Develops appropriate ideas
• Self-selects appropriate books	• Considers audience and purpose
Shared Book Experience	**Writing Strategies/Organization**
• Listens attentively	• Generates ideas to write about
• Responds to questions, text, and pictures	• Presents ideas in clear, logical order
• Joins in when able	• Edits/Revises
Reading Strategies	**Style**
• Understands/Uses 1 to 1 matching	• Chooses appropriate words
• Reads for meaning	• Uses descriptive language
• Uses graphophonic cues	• Exhibits variety of sentence patterns
—initial/final consonants	**Mechanics**
—digraphs	• Spells known words correctly
—consonant blends	• Attempts to spell unknown words
—vowels/vowel combinations	• Uses inventive spelling
• Makes predictions about text	• Uses correct punctuation
• Self-corrects errors	• Uses correct capitalization
• Helps self when in difficulty	• Uses standard language
• Recognizes high frequency words	
• Reads fluently	

Figure 8.5
First-Grade Language Report *(cont.)*

Comprehension	MARKING CODE
• Retells story in own words	• B = Beginning
• Uses context to identify new words	• D = Developing
• Understands main ideas	• I = Independent
• Makes inferences	• (blank) = not yet evaluated
• Identifies problem/conflict in a story	

COMMENTS	
Period 1 Date:	Period 2 Date:
Period 3 Date:	Period 4 Date:

(Adapted from Gehrenbeck, 1994)

What's Happening Currently at the State and National Levels?

Here we provide you with an overview of assessment initiatives and programs being implemented at the state and national levels. Ideas and efforts currently under way include the following (Anderson & Ellis, 1992): creating a national assessment system, developing performance assessments in a variety of content areas, increasing understanding of commonalities and differences among content areas, clarifying the consequences of using national assessments, and investigating the impact of national assessment efforts on fundamental teaching and learning.

There are many national and state programs that may affect you in the future or perhaps already have affected your educational development. Since this information changes often, it's important to keep current with the many reform initiatives.

The *National Assessment of Educational Progress (NAEP)* is a national assessment program, currently coordinated by the U.S. Department of Education and contracted out to the Educational Testing Service (ETS). NAEP provides the only longitudinal assessment of student learning nationwide. NAEP assessments are administered every other year to a nationally representative sample of students in grades four, eight, and twelve (Anderson & Ellis, 1992).

The *National Assessment Governing Board (NAGB)* is an advisory board responsible for recommending the direction of NAEP policies and practices.

The *Council of Chief State School Officers Student Assessment Consortium (CCSSO SAC)* established the *State Assessment Consortium (SAC),* which is exploring strategies that link state, national, and international assessments in an effort to help states network to develop useful tests (Anderson & Ellis, 1992).

In addition, most states operate some type of statewide assessment program, using instruments developed by the state or commercially available tests. The trend in some state-level programs is toward performance-based, portfolio, and "enhanced multiple choice" assessments. However, the level of development and distribution across the curriculum and across grade levels varies considerably from state to state.

Public Law 100-297 (also known as the **Stafford-Hawkins Act**), passed in 1988, established the National Assessment Governing Board and set provisions for developing a national examination, without prescribing a specific model for such a test. Nearly any of the various alternatives described in this chapter might address the need, identified in this legislation, for a nationwide appraisal of student learning (Anderson & Ellis, 1992).

General Educational Development (GED) tests were designed in 1942 by the American Council on Education to enable persons who have not graduated from high school to demonstrate the level of mastery normally acquired from four years of secondary school study. Each of the five tests (writing skills, social studies, science, interpreting literature and the arts, and mathematics) uses a multiple choice question format, and the writing skills test includes an essay.

The *Scholastic Aptitude Test (SAT)*, published by the College Entrance Examination Board, and the *American Council on Testing (ACT)* exam, published by American College Testing Programs, are two tests commonly used by universities and colleges to help them make decisions about potential students' likelihood of succeeding in college. The tests measure verbal and quantitative abilities, using multiple choice questions, and are administered several times a year in all states.

The *Secretary's Commission on Achieving Necessary Skills* (SCANS) was asked to examine the demands of the workplace and determine whether students are capable of meeting those demands. Their investigations resulted in identification of essential competencies and "foundation" skills for twelfth graders, which should be an integral part of every student's school experience.

A Final Word on Assessment and Evaluation: No Crystal Ball

Although we have set our sights on promoting alternative assessment and evaluation systems, we have no crystal ball to help us predict how the assessment revolution will end. Coping with reform can be somewhat disconcerting at times, but it's important to keep your eye on the goal of developing and implementing effective assessment and evaluation systems for your future students. Two of the scarcest resources in the American educational system are money and time, both of which contribute to many of the decisions that schools make. In general, alternatives to multiple choice assessment are more expensive and time-consuming to develop, administer, and score (Hoover & Bray, 1995; Stecher, 1995). For example, it has been suggested that science performance tests cost about thirty times as much to score as do multiple choice tests (Stecher, 1995). Thus, schools will need to commit considerable professional time and expertise to producing and scoring alternative assessments—or allocate funds to purchase them.

The ultimate outcome of the assessment revolution depends on how several critical issues are resolved. Chief among these issues are appropriate assessment and evaluation standards, cost, reasonable standards for at-risk students, technical adequacy, and the professional development of educators (McLaughlin & Warren, 1994). Resolving these issues will demand professionals who are willing to cope with change, collaboration, and culture—topics explored in Chapter 13.

Summarizing What You've Learned

- Assessment and evaluation are interrelated concepts. Assessment refers to data collection and can be thought of as the ongoing act of collecting various types

of information about individuals or groups of individuals in order to understand them better. Evaluation implies bringing meaning to data through interpretation, analysis, and reflection and involves developing a judgment regarding the quality, value, or worth of assessment data, based on established criteria.

- Assessment is rapidly assuming its rightful role as the centerpiece of instruction (Elliott, 1994).
- The primary purpose of early assessment was to exclude individuals from society, school, and the military (Steward, Choate, & Poteet, 1995). Sorting and selecting students are practices that still are alive and actively pursued in schools today.
- How does a teacher deal with assessment contradictions in the classroom? First of all, realize that standardized tests are here to stay. Historically, American society has placed great value on test results. It's your responsibility as a teacher to understand the purposes and value of a variety of different assessment tools and to advocate for appropriate assessment.
- Assessment and evaluation systems serve multiple purposes, including assessing prior knowledge, providing data for revising curricula, offering constructive feedback to students, allowing learners to show what they know, anticipating students' educational needs, and determining if learning objectives have been achieved.
- Measuring the quality of assessment involves three factors: reliability, validity, and fairness. Use the following principles as guides in developing high-quality assessment: employ assessment practices and methods that are consistent with your learning goals, the curriculum, and current knowledge regarding how students learn; ensure that all students receive fair treatment; understand the full range of assessment purposes; invite parents, students, and members of the community to join a variety of experts, teachers, and other educators in shaping the assessment system; regularly discuss assessment practices and student progress with students, families, and the community; and regularly review and improve assessment systems to ensure that they are beneficial to all students.
- Alternative assessment includes any type of assessment in which students do not choose a response from a given list. In performance assessment, students demonstrate their competencies by creating an answer or developing a product (Feuer & Fulton, 1993). Authentic assessment is a subset of performance assessment that requires realistic expectations set in real-life contexts.

YOUR PROFESSIONAL TEACHING PORTFOLIO

- Begin saving your portfolio entries electronically.
- Develop some alternative assessments—checklists, rating scales, rubrics, interviews, surveys— for the lesson plans you developed in Chapter 10.
- During your clinical experiences, record some anecdotal notes you can share in your portfolio. Compare and contrast your anecdotal records for different grade levels.
- Photograph student work samples and portfolio entries.
- During your clinical experiences, videotape conferences that you lead with both parents and students. With the participants' permission, include these videotaped conferences in your portfolio.

Key Terms

Aternative assessment
Analytic rubric
Anecdotal record
Assessment
Authentic assessment
Checklists
Documentation portfolio
Electronic portfolio
Evaluation
Evaluation portfolio
Holistic rubric
Peer assessment
Performance assessment
Portfolio assessment
Process portfolio
Public Law 100-297
Reliability
Rubric
Screening
Self-assessment
Showcase portfolio
Stafford-Hawkins Act
Student-teacher conference
Survey
Triangulated assessment
Validity

Relevant Resources for Professionals

Books and Articles

- National Center for Fair and Open Testing. (1995). *Principles and indicators for student assessment systems.* (ERIC Reproduction Document No. ED 400 334)
- Putnam, J. (1997). *Cooperative learning in diverse classrooms.* Upper Saddle River, NJ: Prentice-Hall.

Professional Organizations

- The American Educational Research Association (AERA).
  The AERA is concerned with improving the educational process by encouraging scholarly inquiry related to education and by promoting the dissemination and practical application of research results.
  http://aera.net/

- The American Evaluation Association (AEA).
  The AEA is an international professional association of evaluators devoted to the application and exploration of program evaluation, personnel evaluation, technology, and many other forms of evaluation.

  http://www.eval.org/

Videos

- *Redesigning Assessment Series*
  Travel to classrooms where assessment approaches turn students from passive test takers into active, independent learners. View numerous examples of performance-based assessments. Three 24- to 40-minute videotapes and three 50-page facilitator's guides.

  Association for Supervision and Curriculum Development
  1703 North Beauregard Street
  Alexandria, VA 22311-1714
  800-933-2723

  http://www.ascd.org

Web Sites

- **The Consortium for Equity in Standards and Testing (CTEST)**
  CTEST focuses attention on how educational standards, assessments, and tests can be used more fairly.

  http://www.csteep.bc.edu/ctest

- **ERIC Clearinghouse on Assessment and Evaluation**
  The ERIC Clearinghouse on Assessment and Evaluation seeks to provide balanced information concerning educational assessment and resources to encourage responsible test use.

  http://ericae.net/

- **The National Center for Research on Evaluation, Standards, and Student Testing (CRESST)**
  Funded by the U.S. Department of Education, CRESST conducts research on important topics related to K–12 educational testing.

  http://cresst96.cse.ucla.edu/

GLOSSARY

Acceleration: Moving students through the curriculum more rapidly than the regular or normal pace.

Advance organizer: A statement or concept a teacher makes or presents to help students understand how previous information relates to new learning and connect what they already know with what they're about to learn.

Affective domain: The domain of learning that involves feelings, attitudes, and values.

Alternative assessment: Any type of assessment in which students create responses, as opposed to choosing them from a given list.

Alternative lifestyle families: Families headed by gay parents.

Amygdalae: Two almond-shaped organs inside the brain that research indicates receive and send all emotional messages.

Analogies: Comparisons that point out similar features of things or ideas that are otherwise different; used as elaboration strategies to help students draw comparisons between familiar concepts and new concepts they're learning.

Analytic rubric: A *rubric* that separates the total performance or product into several elements or criteria.

Anecdotal record: A written "snapshot" of a learning event that describes the event in detail, including the student's name, the date and time, the setting, the activity, and what the student says as well as what he or she does.

Assertive discipline: A teacher-centered approach to classroom management in which the teacher applies the same standards and expectations to all students; based on assertion training.

Assessment: The process of collecting performance data; compare with *evaluation.*

Assistive technology: Equipment or methods used to maintain or improve the functioning of individuals with disabilities.

Asynchronous learning: Instruction in which learners and teachers can access information at different times and from different places, greatly expanding the notion of learning communities and learning environments.

Authentic assessment: A subset of performance assessment that requires realistic expectations set in real-life contexts.

Authentic learning experiences: Learning opportunities that are real to students and have meaning that extends beyond the school context (for example, exploring real ecological problems in their community instead of completing a worksheet on ecosystems).

Authoritarian dogmatism: A stance teachers sometimes adopt as a defense mechanism, in which they present themselves to parents as all-knowing experts whose methods are beyond question.

Authoritarian parenting style: A parenting style characterized by a demanding parent, absolute rules, a restrictive environment, punitive control, and inappropriate expectations.

Authoritative parenting style: A parenting style that stresses democratic decision making, guidelines and parameters, effective communication, problem solving, and self-discipline and responsibility.

Behavior modification: A teacher-centered approach to classroom management in which the teacher doesn't expect learners to solve problems but instead observes student behavior and uses reinforcement to strengthen or diminish specific behaviors.

Blended family: A family in which one or both parents bring with them children from a previous marriage.

Bodily/kinesthetic intelligence: The ability to control one's bodily motions and the talent to manipulate objects with deftness; one of the multiple intelligences described by Howard Gardner.

Brain-based teaching and learning: A theory of learning, derived from recent research on the brain, that describes how learning changes the brain physically.

Brainstorming: A creative thinking strategy used to generate ideas.

Checklists: Prepared lists of competencies or behaviors that anchor a teacher's observations of a particular student or group of students.

Cognitive dissonance: A condition in which one person's understanding of a situation or event conflicts with new and different information and perspectives.

Cognitive domain: The domain of learning that involves mental operations (or thinking skills), ranging from the lowest level of simple recall of information to high-level, complex evaluative processes.

Collaboration: Two or more individuals or organizations working together toward a common goal; more than mere cooperation.

Collaborative learning experiences: Learning activities that students work on together, in groups.

Collaborative reflection: An intervention in which education students "recruit" inservice teachers to discuss with them the concepts and topics they are exploring in their teacher preparation program.

Collaborative rule making: An approach to classroom rule making that can provide an appropriate middle ground between authoritarian administration and permissiveness; can teach learners responsible citizenship skills.

Collaborative scheduling: Constructing schedules to facilitate combined class projects and special classes such as music, art, and physical education; typically used by middle and high school teachers from different content areas, to coordinate instruction.

Collateral learning: Incidental, informal learning; the attitudes, values, feelings, and appreciation that accompany formal learning in schools; the hidden curriculum.

Collective bargaining agreement: A written record of an agreement between a bargaining agent such as a National Education Association (NEA) or American Federation of Teachers (AFT) local affiliate and a school board; typically specifies working conditions, salaries, and evaluation procedures for local employees.

Community model: A learner-centered approach to *instructional guidance* that focuses on students working together to solve problems.

Community of learners: A class that reflects the best-practice principles of democratic decision making, collaboration, and cooperative learning.

Comprehensive, integrated-services approach: An approach to the provision of education and health care that acknowledges that all aspects of individuals' lives affect their success as students, patients, family members, and community residents.

Concept teaching: A strategy for facilitating learners' acquisition of declarative knowledge.

Conceptually oriented unit: A unit of instruction that involves the investigation of more broad-based topics, providing learners with many opportunities to discover relationships between different ideas.

Conceptual skills: Leaders' abilities to understand the complexities of the organization where they work (such as a school) and where and how they and their actions fit into that organization.

Conditional knowledge: Knowledge about when and why to use particular examples of *declarative knowledge* or *procedural knowledge.*

Conjunctive concepts: Concepts that are constant and do not change; compare with *disjunctive concepts* and *relational concepts.*

Constructivism: A best-practice principle, based on the belief that learners organize new information around previously developed schemata.

Content-oriented unit: A unit of instruction that originates within a particular content area, such as science or social studies, but involves topics that can be investigated across all content areas, such as small animals or neighborhoods.

Content standards: One of three types of standards that education reform initiatives typically center around; focus on curricula; compare with *performance standards* and *school delivery standards.*

Contract: A legal document that specifies a teacher's duties, responsibilities, teaching assignment (grade, subject), and salary for a specific time frame.

Core book: A literature selection that takes on a central and unifying role in a literature-based curriculum.

Creative problem solving: A systematic process for approaching a problem in an imaginative way that will result in effective action.

Creative thinking: Soft, divergent thinking; occurs during the *germinal phase* of new idea development.

Criterion-referenced assessment: An assessment technique in which a teacher collects assessment data and interprets them based on certain standards or criteria; compare with *norm-referenced assessment.*

Critical attributes: Qualities of a given concept that are essential to that concept.

Critical pedagogy: Classroom teaching that proceeds from a consideration of students' everyday lives and experiences.

Critical thinking: Hard, convergent thinking; occurs during the *practical phase* of new idea development.

Cultural networks: An informal but important means of communicating an organization's shared values and heroic mythology within the organization.

Culture: The traditions, beliefs, art and literature, philosophies, social structures, language, history, accomplishments, and so on of a distinct group of people, such as an ethnic group, a country, or an organization (including a school).

Curriculum: The materials a learner studies; defined by some theorists as *all* the experiences a learner has in school.

Curriculum articulation: Communicating curricular goals and connecting them with instruction.

Curriculum guide: An overview that communicates to teachers, parents, and the community the critical components of the curriculum and provides a framework that guides curriculum development for students, teachers, and administrators.

Curriculum processes: How the contents of curricula are taught.

Curriculum webs: A planning tool in which a curriculum is represented visually as a web; helps teachers achieve a balance between concepts and processes and between learner-initiated and teacher-initiated activities.

Decision making: A part of or corollary to leadership that involves influencing others to pursue goals that represent their values and motivations as well as one's own; also see *leadership*.

Declarative knowledge: Knowledge about something; compare with *procedural knowledge* and *conditional knowledge*.

Developmentally and culturally appropriate practice (DCAP): An extension of developmentally appropriate practice (DAP) that compensates for DAP's lack of multicultural sensitivity by promoting culturally congruent pedagogy.

Direct instruction: An instructional strategy often used to teach basic skills, facts, and knowledge; appropriate for teaching both procedural and declarative knowledge.

Discussion model: An instructional strategy in which the teacher reads material assigned to students and prepares questions to focus classroom discussion.

Disequilibrium: The intellectual tension related to a child's curiosity, according to Piaget.

Disjunctive concepts: Concepts that can take alternative forms; compare with *conjunctive concepts* and *relational concepts*.

Dispositions: Habits of mind or tendencies to respond to certain situations in certain ways; curiosity, friendliness or unfriendliness, bossiness, and creativity are all examples of dispositions that parents and teachers can strengthen or diminish by setting learning goals for children.

Divergent thinking: The process of generating ideas, making new connections, perceiving gaps, and identifying paradoxes; looking at the same things many other people have looked at before but seeing those things in different ways; creative thinking.

Documentation portfolio: A collection of work that provides evidence of student learning and growth.

Educational neglect: When parents fail to make sure their children attend school, permit chronic truancy, or fail to attend to any special educational needs of their children.

Effective momentum management model: A teacher-centered approach to classroom management that emphasizes creating an environment that prevents disruptive behaviors.

Elaboration: Augmenting or modifying an idea with more information in order to improve it; one of the five components of productive thinking.

Electronic portfolio: A professional teaching portfolio stored and distributed in electronic form, such as on the Web or on CD-ROM.

Elementary and Secondary Education Act (ESEA): Recent major legislation that has made it a national priority to involve parents in their children's education.

Emotional brain: The part of the brain that regulates emotions; the limbic brain; see also *amygdalae*.

Emotional intelligence: Emotional well-being; the ability to identify and manage one's feelings, control impulses, handle stress, read social and emotional cues, listen to others, resist negative influences, understand the perspective of others, and understand what behavior is acceptable in a certain situation.

Emotional literacy: For teachers, the ability to create a classroom community that consistently supports and nurtures appropriate norms, values, and behaviors.

Emotional neglect: Neglecting a child's emotional needs; includes refusing to provide needed psychological help, exposing a child to abuse by someone else, and allowing a child to use drugs or alcohol.

Encoding: Learners connecting new information to their prior knowledge and existing schemata.

Equality: Identical treatment for different individuals; not necessarily the same thing as fairness; compare with *equity*.

Equity: Fairness; not necessarily the same thing as identical treatment; compare with *equality*.

Ethnicity: The general composite of cultural and physical characteristics that can be attributed to both individuals and groups.

Evaluation: Judging the worth of an idea or bringing meaning to data, based on predetermined criteria or standards; one of the five components of productive thinking; compare with *assessment*.

Evaluation portfolio: A portfolio of student work used to evaluate students on preselected tasks, using predetermined criteria.

Existential intelligence: An inclination to ask basic questions about existence (Who are we? Where did we come from? Why do we die?); one of the multiple intelligences described by Howard Gardner.

Explicit curriculum: The "official," written-down curriculum.

Family Educational Rights and Privacy Act (Buckley Amendment): A law that ensures that parents of stu-

dents under the age of eighteen have the right to see and control their children's school records.

Flexibility: Seeing things from a different point of view or breaking away from habitual patterns of thought; one of the five components of productive thinking.

Fluency: Generating many possibilities or producing lots of ideas; values quantity over quality; one of the five components of productive thinking.

Foster care: State-arranged care for children in homes other than those of their biological parents.

Germinal phase: The first stage in the development of most new ideas; characterized by *creative thinking*.

Goal: A general outcome a teacher plans to achieve in his or her practice.

Goals 2000: Educate America Act: Major recent legislation emphasizing school-home partnerships.

Group investigation: A grouping strategy in which each member of a heterogeneous group pursues an in-depth investigation of an aspect of a topic; then group members synthesize the results of their individual investigations, plan and execute a group presentation of their findings, and evaluate both the group's investigation process and its finished product.

Hidden curriculum: Unofficial instructional influences that support or weaken goal attainment.

Holistic learning experiences: Learning opportunities that connect several different curriculum components.

Holistic rubric: A *rubric* that results in one score that represents an evaluation of the total performance or product; compare with *analytic rubric*.

Horizontal relevance: Appropriate integration of curricular activities across a particular grade level.

Immigrant families: Families that have recently moved to the United States from a foreign country.

Implicit curriculum: Learning that takes place because students are part of the school culture (such as learning to provide the teacher with what the teacher wants or expects).

Inclusion: The practice of providing for learners' special needs within a regular classroom environment.

Individualized instruction: A strategy in which a student receives one-on-one instruction.

Instructional decision making: The complex process of selecting appropriate instruction and reflecting on one's teaching practice to provide optimum performance as a teacher.

Instructional guidance: An alternative approach to classroom management that goes beyond conventional classroom discipline, which focuses on controlling learners; requires a positive learning environment that is developmentally appropriate and culturally responsive; teaches learners the life skills they need as citizens of a democracy.

Instructional objectives: Statements that describe teachers' intentions for students' growth and change.

Integrated curriculum: A curriculum that incorporates the interrelationships or connections between different developmental domains and content areas; the larger notion from which *integrative units* are derived.

Integrated therapy team (ITT): A group of professionals from different disciplines (teachers, doctors, social services providers, and so on) who work collaboratively to address the social, physical, and psychological issues that affect children, families, and communities, without duplicating services or getting in one another's way.

Integrative unit: A collection of lessons, activities, and resources connected by a unifying concept or topic that is contextualized in a real-life framework, promotes active learning, and interrelates development as learners acquire knowledge, performances (skills), and dispositions.

Interactive planning phase: The second phase of instructional planning and decision making; consists of presenting, questioning, assisting, providing for skills practice, making transitions, and guiding learners.

Intercultural marriages: Marriages between individuals from different cultural groups.

Interdisciplinary instruction: Instruction that makes use of an *integrated curriculum* and *integrative units;* instruction that includes a range of disciplines.

Interest groups: A grouping strategy in which small groups are formed on the basis of students' interests.

Interethnic marriages: Marriages between individuals from different ethnic groups.

Interpersonal skills: The ability to work with and through people to achieve desired results; the most crucial group of leadership skills teachers must master.

Interstate certification contract: A program that enables teachers and other education professionals to have their credentials recognized in other states.

Interstate New Teachers Assessment and Support Consortium (INTASC): A group that has created a set of performance standards for beginning teacher licensure and an assessment process for measuring beginning teachers' performance against those standards.

Jigsaw groups: A grouping strategy in which each member of a heterogeneous study team studies one

aspect of a topic, instructs members of other teams in what he or she has learned and in turn learns about what they've studied, and then rejoins his or her original team to teach the team members what was learned from the other teams.

KWL strategy: An instructional strategy that takes account of learners' existing schemata ("What do you *know*?"), considers what they're interested in learning ("What do you *want* to know?"), and measures what they learn as a result of instruction ("What did you *learn*?").

Laissez-faire parenting style: A parenting style characterized by an "anything goes" approach, neglectful parents, an environment in which no one cares, and withdrawal from parental responsibilities.

Leadership: A part of or corollary to decision making; in the context of teacher leadership refers to assisting people in accomplishing goals that represent their own values as well as one's own; also see *decision making.*

Learning center: A learning station; a place in the classroom where materials related to a specific curriculum component are available for students to use on their own.

Learning environments: The setting for learning; includes the classroom and all places where learning occurs, encompassing both incidental and planned learning.

Legal guardians: The adults who have legal guardianship rights and responsibilities in relation to a given child; frequently but not always the child's biological or adoptive parents.

Literature-based instruction: Instruction that is centered around trade books rather than textbooks.

Literature circles: A grouping strategy similar to adult book discussion groups, in which students choose their own books and discussion partners, establish a reading and meeting schedule, and determine how they will share their reading with one another.

Logical consequences: An instructional guidance approach designed not to punish students but to change their behavior by making clear the connection between a learner's behavior and a resulting action.

Long-range planning: Planning that identifies the general curriculum content and its sequence over the long term (generally a year); the most comprehensive type of instructional planning; compare with *mid-range planning* and *short-range planning.*

Management: An inherent element of leadership and a prerequisite of effective teaching; entails nine "executive functions," including planning; communicating goals; regulating activities; and motivating, supervising, and evaluating other people.

Mentoring: A relationship in which a more experienced professional (such as a teacher) instructs and serves as a role model for a less experienced colleague.

Metacognition: Thinking about thinking; learners' considering their own thought processes and choosing learning strategies that are appropriate for specific tasks.

Mid-range planning: Term and unit planning; compare with *long-range planning* and *short-range planning.*

Migrant families: Families that must move frequently, usually because of employment requirements.

Multiple intelligences theory: A way of thinking about intelligence, proposed by Howard Gardner in 1983, that defines intelligence as the ability to solve problems and create products valued in a particular cultural setting; includes the premises that there is more than one kind of intelligence, intelligence can be taught, a brain is as unique as a fingerprint, and intelligences are forever changing throughout life.

National Board for Professional Teaching Standards (NBPTS): A group established to develop rigorous standards and assessments for certifying highly experienced and accomplished teachers.

National Council for Accreditation of Teacher Education (NCATE): A collaborative, nongovernmental, nonprofit enterprise that provides accreditation of U.S. teacher preparation programs.

Nation at Risk, A: A report released by the National Commission on Excellence in Education in 1983 that became a watershed event in education; called for higher standards for learning and teaching, increased funding for education, more leadership from government and from schools, longer school days, a longer school year, stricter attendance policies, stricter conduct policies, more homework, and academic performance prerequisites for extracurricular activities.

Natural consequences: An instructional guidance approach based on the principle that reality can influence students' behavior more than teachers can; "teachable moments" that provide authentic and natural contexts for learning.

Nonlinear instructional planning model: Planning process in which the teacher begins by developing instructional activities, then connects those activities to the outcomes they will produce, and then identifies the goals to which the outcomes relate; the "ready-fire-aim" approach.

Norm-referenced assessment: Comparing students to one another; compare with *criterion-referenced assessment.*

Null curriculum: The curriculum that does not exist; what schools *do not* teach.

Objective: A specific outcome a teacher plans to achieve in his or her practice.

Official curriculum: The written curriculum.

Operational curriculum: What teachers actually teach and how teachers communicate to students the importance of what is taught.

Organizational change: A disruption to the status quo of an organization; introducing an innovation that those in charge believe will lead to enhanced performance or improvements of some sort.

Organizational culture: The basic assumptions that operate within an organization, revealed by the behavior of organizational members as well as by certain valueled outward manifestations of those assumptions, such as the organizational structure, the management style of the organization's leaders, and the organization's physical setting; includes an emotional dimension and reflects the importance of having a sense of identification and meaning; acts as a kind of social glue that connects and holds together an organization's different parts.

Organizational environment: The everyday social and physical surroundings in which people do most or all of their work.

Organizational structures: The way in which teachers organize people, time, space, resources, curricula, and materials; can directly affect learner success.

Originality: Seeing in a unique way or thinking in a new or novel pattern; one of the five components of productive thinking.

Parenting styles: The general approach or style a parent has in raising his or her children; may be effective or ineffective.

Pedagogy: The methods, art, and science of educating people; knowledge and scholarship related to the teaching profession.

Peer assessment: An assessment method in which either an individual student or a small group of three or four students are called on to evaluate the work of one or more peers.

Peer response and editing groups: A grouping strategy in which three to five students meet regularly to offer one another feedback and advice on their writing.

Performance assessment: An assessment method in which students demonstrate their competencies or knowledge by creating an answer or developing a product.

Performances: Teaching skills teachers must display and apply as effective practitioners.

Performance standards: One of three types of standards that education reform initiatives typically center around; focus on student work and assessment; compare with *content standards* and *school delivery standards*.

Physical neglect: Failure by parents to provide their children with necessities such as adequate shelter, care and supervision, food, clothing, protection, and medical care.

Portfolio: A collection of materials that demonstrate a preservice or inservice teacher's knowledge base and instructional experience and philosophy.

Portfolio assessment: An assessment method that uses collections of selected student work which may or may not represent authentic tasks.

Positive discipline: A learner-centered approach to *instructional guidance* that emphasizes supporting students in reaching their goal of belonging and contributing.

Postinstructional planning phase: The last phase of instructional planning and decision making, consisting of checking for understanding, providing feedback, assessing and evaluating student performance, and communicating the learning outcomes to students and parents.

Practical phase: The second stage in the development of most new ideas; characterized by *critical thinking*.

Preinstructional planning phase: The first phase of instructional planning and decision making; includes choosing content, choosing an instructional approach, allocating time and space, determining structures, and determining motivation.

Presentation model: An instructional strategy often used to help students learn and retain declarative knowledge; typically includes four steps: present objectives and establish set, present an advance organizer, present learning materials, and check for understanding and strengthen learner thinking.

Principles of best practice: A synopsis, developed by Zemelman, Daniels, and Hyde (1998) of what researchers and practitioners know about effective teaching and learning.

Procedural knowledge: Knowledge about how to do something; compare with *declarative knowledge* and *conditional knowledge*.

Process portfolio: A collection of items and artifacts demonstrating work that typically is a part of a larger project.

Productive thinking: A combination of creative and critical thinking; includes *divergent* and *convergent thinking,* soft and hard thinking, *germinal* and *practical thinking.*

Professional development plan (PDP): The objectives, rationales, procedures, materials, and assessment and evaluation strategies a teacher defines and develops to guide her or his professional development.

Professional development schools (PDSs): An educational innovation designed to simultaneously restructure and renew PreK–12 schooling and teacher preparation.

Professional ethics: Moral guidelines that direct one's judgment and actions; the manifestations of a teacher's beliefs and values in his or her practice.

Professional teaching portfolio (product or showcase portfolio): A portfolio developed by a preservice or inservice teacher to showcase his or her achievements; sometimes required to complete a teacher preparation program.

Program articulation: Describing the ways in which programs and curricula within or across grade levels connect with one another.

Project: An investigation undertaken by a student or group of students to learn more about a topic.

Project Approach: An approach to instruction that involves students in in-depth investigations of topics.

Psychomotor domain: The domain of learning that involves physical movement, ranging from the lowest level, simple manipulation of materials, to the higher level of communicating ideas and finally the highest level, creative performance.

Public Law 100-297 (Stafford-Hawkins Act): Legislation passed in 1988 that established the National Assessment Governing Board and set provisions for developing a national examination.

Question-and-answer relationships (QARs): Relationships that exist among the kinds of questions asked, a piece of text, and the reader's *schema* or prior knowledge.

Rational-linear instructional planning model: A planning approach in which the teacher first defines goals and objectives and then plans instructional activities to satisfy those objectives; the dominant perspective on instructional planning.

Reality therapy model: A learner-centered approach to *instructional guidance* in which teachers help students identify inappropriate behavior and plan more desirable behavior.

Reciprocity: An agreement by which teaching credentials from one state are honored by other states' credentialing agencies; may be regional or among several states.

Reflect: To think about learning processes and outcomes and analyze one's own thinking and performance as a learner.

Reflection: Self-analysis of one's teaching practice; consists of assessing the attitudes, dispositions, knowledge base, and performances that together make up the whole picture of how effective one is as a teacher.

Reflective educator: An individual who carefully examines his or her own and others' professional practice and engages in school-based action research with fellow *researcher-teachers.*

Reflective practitioners: Teachers who engage in reflection.

Reggio Emilia Approach: An approach to curricular integration in which children learn through cooperating with other children and their teachers in long-term projects based on children's interests and centered around the creative arts.

Relational concepts: Concepts that describe relationships between two or more other concepts; compare with *disjunctive concepts* and *conjunctive concepts.*

Reliability: The accuracy of students' scores or outcomes on an assessment; the degree to which similar scores are likely to be produced in subsequent administrations of a given test or alternative assessment.

Researcher-teacher: A teacher who systematically analyzes his or her teaching and his or her students' learning to find out if certain strategies are making a difference in the students' achievement and performance.

Resource interdependence: A type of positive interdependence for use in cooperative learning; exists when group members need to share one set of materials and subdivide them so each member is responsible for a certain resource; also called a resource jigsaw.

Resource unit: A group of learning centers organized to promote independent, small group, or self-directed study.

Responsible classroom management model: A learner-centered approach to *instructional guidance* that considers learners as individuals to be treated fairly, but not necessarily identically.

Retention: The practice of having students repeat a grade.

Reward interdependence: A type of positive interdependence for use in cooperative learning; exists when

group members learn new material together, are assessed individually, and then are rewarded on the basis of a performance ratio, such as 50 percent credit for every problem they solve correctly and 50 percent of the group members' average performance.

Rites and rituals: Activities that demonstrate for an organization's members its values, expectations, or accepted operating procedures; can be mundane and part of the daily routine of the organization (such as meetings) or extravagant, powerful events (such as awards ceremonies).

Role interdependence: A type of positive interdependence for use in cooperative learning; created when group members have complementary, interconnected roles.

Rote rehearsal: A rehearsal strategy; repeating out loud or subvocalizing information learners wish to remember; used to remember short lists, phone numbers, directions, and other simple information.

Round robin reading: The practice of having one student read aloud while other students follow along in their books; an example of a teaching practice that has not kept pace with theory and research on learning.

Rubric: A scoring guide that helps establish uniformity in evaluation of a student.

Schema: A model or pattern, based on a person's prior experience, used to make sense of a situation or concept.

Schema theory: A theory of knowledge that concerns the manner in which information is organized by the brain, encoded into memory, and retrieved from memory.

School-based action research: Systematic attempts to assess the effectiveness of one's teaching (see *researcher-teacher*).

School culture: The organizational culture of a school.

School delivery standards: One of three types of standards that education reform initiatives typically center around; focus on resources and support for school, teacher, and children; compare with *content standards* and *performance standards*.

School-family compacts: Agreements made between families and schools that declare their mutual responsibility for children's learning.

School volunteers: Unpaid personnel who usually work on a temporary basis and perform tasks that supplement, but do not take the place of, the work of paid staff members.

Screening: A method often used to determine students' readiness for school or specific programs; provides an opportunity to look at the developmental skills of a large number of students in a limited amount of time.

Self-assessment: A strategy for promoting in-depth learning with a focus on continual growth and improvement.

Self-control: The management of one's own behavior based, in part, on information generated through *self-monitoring*.

Self-monitoring: Consistently tracking, recording, and evaluating one's own behavior over time.

Sexual harassment: Unwelcome verbal or physical conduct of a sexual nature imposed by one individual on another.

Shared values: The basic beliefs that provide a sense of common direction for organization members and provide guidelines for their day-to-day behavior; the basis for an *organizational culture*.

Short-range planning: Weekly and daily lesson planning; compare with *mid-range planning* and *long-range planning*.

Showcase portfolio: A collection of work that both a student and his or her teacher believe represents that student's best efforts.

Simulation model: An instructional strategy that allows students to learn from self-generated feedback, by playing out specific situations within a controlled environment and then modifying their behavior based on their reactions and performances.

Single-parent family: A family in which a mother or father is single-handedly raising dependent children living in the same household; also called a one-parent, lone-parent, or solo-parent family.

Situational leadership: Determining whether group or individual leadership is preferable in a specific circumstance; considers the characteristics and needs of individual followers.

Skills groups: A grouping strategy in which a heterogeneous mix of students who share a common instructional need are brought together.

Stafford-Hawkins Act: See *Public Law 100-297*.

Student-teacher conference: A meeting in which the teacher talks with a student to help the student reflect on her or his work.

Suchman inquiry model: An approach for teaching problem solving through discovery and questioning; based on the belief that the strategies scientists use to solve problems and explore the unknown can be taught and learned and that people learn best those things that puzzle and intrigue them.

Survey: An instrument that asks students to respond to questions or rate items; used to learn about student attitudes toward specific subject matter, to determine

their history with particular subjects, and to communicate to students that their ideas are valued.

Task interdependence: A type of positive interdependence for use in cooperative learning; arises when a division of labor is created and the actions of one group member must be completed if the next group member is to complete his or her responsibilities.

Taxonomy: A classification system that divides things into ordered categories.

Teacher effectiveness training: A learner-centered approach to *instructional guidance* in which each individual is supported in gaining confidence in his or her abilities by using open communication.

Teacher efficacy: The belief of teachers who see themselves as teacher leaders that they can make a positive difference in students' achievement; encourages teachers to place less blame on factors beyond their control.

Teacher induction: A rite of passage into the culture of teaching; the period during which a new teacher becomes socialized into the culture of the teaching profession.

Teaching credo: A succinct articulation of a teacher's fundamental beliefs about teaching and learning.

Technical skills: One of the three groups of skills required for teacher leadership and decision making; includes knowledge of both technology and pedagogy; see also *interpersonal skills* and *conceptual skills*.

Think-aloud: An instructional strategy in which teachers talk out loud to model the thinking they are using to approach a problem or answer a question.

Tracking: The practice of assigning students to different curricula (steering them toward specific course sequences, such as vocational or college preparatory courses) or different classes based on ability levels; can take many forms, including retention, acceleration, ability grouping, educational sorting, and the use of reading groups.

Traditional model: A teacher-centered approach to classroom management in which the teacher uses praise and rewards to correct student misbehavior.

Transactional leadership: When one person takes the initiative to contact others for the purpose of exchanging something of value.

Transescence: The transition phase between childhood and adolescence.

Transforming leadership: When leader and follower interact in such a way that both are raised to a higher level of motivation and morality; has the potential to raise the moral level of human conduct and the ethical aspirations of both the leader and the led.

Triangulated assessment: An assessment tool that provides three windows or modes for evaluating students' competencies.

Unit: A collection of lessons, activities, and resources connected by a unifying concept or topic.

Validity: How closely a test or alternative assessment measures what it is intended to measure.

Vertical articulation: The overall learning continuum that begins in pre-K and extends through the twelfth-grade curriculum.

Whole language: A philosophy that proposes that instruction should keep language whole and involve children in using it purposefully and functionally.

Whole learner: A complete picture of a learner; accounts for a learner's attitudes, values, and emotions as well as his or her social, physical, and cognitive development.

Zone of proximal development (ZPD): The area between an individual's actual and potential development; described by Vygotsky.

The National Center for Educational Information has developed a classification system for categorizing the various state programs for alternative teacher certification. Programs are grouped under one of ten classifications ranging from Class A (the highest rating) to Class J (the lowest rating). New Jersey is one of only nine states to receive a Class A rating.

Class A Programs are "true" alternative teacher certification programs that meet the following criteria:

- The program has been designed for the explicit purpose of attracting talented individuals, who already have at least a bachelor's degree in a field other than education, into elementary and secondary school teaching.

- The program is not restricted to shortages, secondary grade levels or subject areas.

- The alternative teacher certification programs in these states involve teaching with a trained mentor, and formal instruction that deals with the theory and practice of teaching during the school year – and sometimes in the summer before and/or after.

Alternative Teacher Certification: A State-by-State Analysis 2001
National Center for Education Information
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P9-CTE-788

ISBN 0-618-30138-0
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